(Hetero)cyclyl carboxanilides for controlling harmful fungi

The present invention relates to (hetero)cyclic carboxanilides having an oxime ether function, and to their use for controlling harmful fungi.

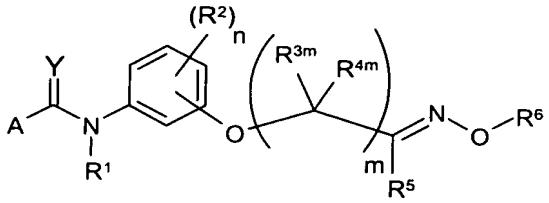
WO 02/08195 describes fungicidally active 1,3-dimethyl-5-fluoropyrazole-4-carboxanilides having, in the 2-position of the phenyl ring, a phenyl group having an oxime ether group. WO 02/08197 discloses hetarylanilides of a similar structure. WO 98/03500 describes carbanilides which may, inter alia, have an oxime aryl ether group on the phenyl ring. However, examples of these are not given.

However, in particular at low application rates, the (heteroaryl)carboxanilides described in these publications are not entirely satisfactory. It is an object of the present invention to provide novel (heterocyclyl)carboxanilide derivatives.

Accordingly, it is an object of the present invention to provide fungicidally active compounds which overcome the disadvantages of the compounds known from the prior art and, in particular, have improved activity at low application rates. Moreover, these compounds should be tolerated well by crop plants and, if possible, cause no or only little damage to useful animals.

We have found that this object is achieved by the (hetero)cyclylcarboxanilides of the formula I described below and their agriculturally acceptable salts,

Accordingly, the present invention relates to (hetero)cyclylcarboxanilides of the formula I,



(I)

in which variables are as defined below:

A is phenyl or an at least monounsaturated 5- or 6-membered heterocycle having 1, 2 or 3 heteroatoms selected from the group consisting of N, O, S, S(=O) and $S(=O)_2$ as ring members, where phenyl and the at least monounsaturated 5- or 6-membered heterocycle may be unsubstituted or may carry 1, 2 or 3 radicals R^a, where

R^a is halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_4-haloalkenyl, C_2-C_4-haloalkynyl, C_1-C_4-haloalkoxy or phenyl, where phenyl may be unsubstituted or carries one, two or three radicals R^b selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_4-haloalkenyl, C_2-C_4-haloalkynyl and C_1-C_4-haloalkoxy;

Y is oxygen or sulfur;

R^1 is H, OH, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl or C_1-C_4-haloalkoxy;

R^2 is halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_4-haloalkenyl, C_2-C_4-haloalkynyl or C_1-C_4-haloalkoxy;

R^{3m}, R^{4m} are each independently of one another halogen, hydrogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, phenyl, phenyl-C_1-C_4-alkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-alkynyl, C_1-C_6-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_6-haloalkenyl, C_2-C_6-haloalkynyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-haloalkenyl or phenyl-C_2-C_4-haloalkynyl, where phenyl or the phenyl moiety of phenyl-C_1-C_4-alkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-alkynyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-haloalkenyl and phenyl-C_2-C_4-haloalkynyl may be unsubstituted or may carry one, two or three radicals R^b; for m = 2 or 3 the variables R^{32}, R^{42} and R^{33}, R^{43}, respectively, may also be C_1-C_6-alkoxy;

R^5 is hydrogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, phenyl, phenyl-C_1-C_4-alkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-alkynyl, C_1-C_6-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_6-haloalkenyl, C_2-C_6-haloalkynyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-haloalkenyl or phenyl-C_2-C_4-haloalkynyl, where phenyl or the phenyl moiety of phenyl-C_1-C_4-alkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-alkynyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-haloalkenyl, phenyl-C_2-C_4-haloalkynyl may be unsubstituted or may carry one, two or three radicals R^b;

R^6 is hydrogen, C_1-C_8-alkyl, C_3-C_6-cycloalkyl, C_2-C_8-alkenyl, C_2-C_8-alkynyl, C_1-C_8-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_8-haloalkenyl, C_2-C_8-haloalkynyl,

phenyl, naphthyl, phenyl-C_1-C_6-alkyl, naphthyl-C_1-C_6-alkyl, phenyl-C_2-C_6-alkenyl, phenyl-C_2-C_6-alkynyl, phenyl-C_1-C_6-haloalkyl, phenyl-C_2-C_6-haloalkenyl or phenyl-C_2-C_6-haloalkynyl, where phenyl and naphthyl in the 9 last-mentioned groups may be unsubstituted or may carry 1, 2 or 3 substituents selected from the group consisting of R^b and R^7, where R^7 is $-(CR^8)=NOR^9$, where

R^8 is hydrogen, C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_6-haloalkenyl, C_2-C_6-haloalkynyl, phenyl, benzyl; where phenyl and the phenyl group in benzyl may be unsubstituted or may carry one, two or three radicals R^b; and

R^9 is C_1-C_6-alkyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-haloalkyl, C_3-C_6-halocycloalkyl, C_2-C_6-haloalkenyl, C_2-C_6-haloalkynyl, phenyl, phenyl-C_1-C_4-alkyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-haloalkenyl, phenyl-C_2-C_4-alkynyl, phenyl-C_2-C_4-haloalkynyl, where phenyl and the phenyl group in phenyl-C_1-C_4-alkyl, phenyl-C_1-C_4-haloalkyl, phenyl-C_2-C_4-alkenyl, phenyl-C_2-C_4-haloalkenyl, phenyl-C_2-C_4-alkynyl and phenyl-C_2-C_4-haloalkynyl may be unsubstituted or may carry one, two or three radicals R^b;

n is 0, 1, 2, 3 or 4; and

m is 1, 2 or 3;

and their agriculturally useful salts.

Moreover, the present invention relates to the use of the (hetero)cyclylcarboxanilides of the formula I and their agriculturally useful salts as fungicides, and to crop protection compositions comprising these compounds.

Furthermore, the present invention relates to a method for controlling phytopathogenic fungi (harmful fungi), which method comprises treating the harmful fungi, their habitat or the plants, areas, materials or spaces to be kept free from them with a fungicidally effective amount of a (hetero)cyclylcarboxanilide of the formula I and/or an agriculturally useful salt of I.

Depending on the substitution pattern, the compounds of the formula I may contain one or more centers of chirality, in which case they are present as mixtures of enantiomers or diastereomers. The invention provides both the pure enantiomers or diastereomers and their mixtures. Suitable compounds of the formula I also comprise all possible

stereoisomers (cis/trans isomers) and mixtures thereof.

Suitable agriculturally useful salts are especially the salts of those cations or the acid addition salts of those acids whose cations or anions, respectively, have no adverse effect on the compounds I. Thus, suitable cations are in particular the ions of the alkali metals, preferably sodium and potassium, of the alkaline earth metals, preferably calcium, magnesium and barium, and of the transition metals, preferably manganese, copper, zinc and iron, and also the ammonium ion which, if desired, may carry one to four C_1-C_4-alkyl substituents and/or one phenyl or benzyl substituent, preferably diisopropylammonium, tetramethylammonium, tetrabutylammonium, trimethylbenzylammonium, furthermore phosphonium ions, sulfonium ions, preferably tri(C_1-C_4-alkyl)sulfonium, and sulfoxonium ions, preferably tri(C_1-C_4-alkyl)sulfoxonium.

Anions of useful acid addition salts are primarily chloride, bromide, fluoride, hydrogensulfate, sulfate, dihydrogenphosphate, hydrogenphosphate, phosphate, nitrate, hydrogencarbonate, carbonate, hexafluorosilicate, hexafluorophosphate, benzoate, and the anions of C_1-C_4-alkanoic acids, preferably formate, acetate, propionate and butyrate. They can be formed by reacting I with an acid of the corresponding anion, preferably hydrochloric acid, hydrobromic acid, sulfuric acid, phosphoric acid, nitric acid.

In the definitions of the variables given in the formulae above, collective terms are used which are generally representative for the substituents in question. The term C_n-C_m denotes in each case the possible number of carbon atoms in the respective substituent or substituent moiety. All hydrocarbon chains, i.e. all alkyl, haloalkyl, phenylalkyl, alkenyl, haloalkenyl, phenylalkenyl, alkynyl, haloalkynyl and phenylalkynyl moieties can be straight-chain or branched. Halogenated substituents preferably carry one to five identical or different halogen atoms. The term halogen denotes in each case fluorine, chlorine, bromine or iodine.

Examples of other meanings are:

- C_1-C_4-alkyl: CH_3, C_2H_5, CH_2–C_2H_5, $CH(CH_3)_2$, n-butyl, $CH(CH_3)$–C_2H_5, CH_2–$CH(CH_3)_2$ or $C(CH_3)_3$;

- C_1-C_4-haloalkyl: a C_1-C_4-alkyl radical as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e., for example, CH_2F, CHF_2, CF_3, CH_2Cl, $CH(Cl)_2$, $C(Cl)_3$, chlorofluoromethyl, dichlorofluoromethyl, chlorodifluoromethyl, 2-fluoroethyl, 2-chloroethyl, 2-bromoethyl, 2-iodoethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl,

2-chloro-2-fluoroethyl, 2-chloro-2,2-difluoroethyl, 2,2-dichloro-2-fluoroethyl, 2,2,2-trichloroethyl, C_2F_5, 2-fluoropropyl, 3-fluoropropyl, 2,2-difluoropropyl, 2,3-difluoropropyl, 2-chloropropyl, 3-chloropropyl, 2,3-dichloropropyl, 2-bromopropyl, 3-bromopropyl, 3,3,3-trifluoropropyl, 3,3,3-trichloropropyl, CH_2-C_2F_5, CF_2–C_2F_5, 1-(fluoromethyl)-2-fluoroethyl, 1-(chloromethyl)-2-chloroethyl, 1-(bromomethyl)-2-bromoethyl, 4-fluorobutyl, 4-chlorobutyl, 4-bromobutyl or nonafluorobutyl;

- C_1-C_8-alkyl: a C_1-C_4-alkyl radical as mentioned above, or, for example, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl or 1-ethyl-2-methylpropyl, preferably CH_3, C_2H_5, CH_2-C_2H_5, $CH(CH_3)_2$, n–butyl, $C(CH_3)_3$, n–pentyl, n-hexyl, n-heptyl or n-octyl;

- C_1-C_8-haloalkyl: a C_1-C_8-alkyl radical as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e., for example, one of the radicals mentioned under C_1-C_4-haloalkyl or 5-fluoro-1-pentyl, 5-chloro-1-pentyl, 5-bromo-1-pentyl, 5-iodo-1-pentyl, 5,5,5-trichloro-1-pentyl, undecafluoropentyl, 6-fluoro-1-hexyl, 6-chloro-1-hexyl, 6-bromo–1–hexyl, 6-iodo-1-hexyl, 6,6,6–trichloro–1–hexyl or dodecafluorohexyl;

- C_2-C_4-alkenyl: unsaturated straight-chain or branched hydrocarbon radicals having 2 to 4 carbon atoms and a double bond in any position, for example ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-buten-1-yl, 1-buten-2-yl, 1-buten-3-yl, 2–buten–1–yl, 1-methylprop-1-en-1-yl, 2-methylprop-1-en-1-yl, 1-methylprop-2-en-1-yl, 2-methylprop-2-en-1-yl;

- C_2-C_6-alkenyl: C_2-C_4-alkenyl as mentioned above and also, for example: n-penten-1-yl, n-penten-2-yl, n-penten-3-yl, n-penten-4-yl, 1-methylbut-1-en-1-yl, 2-methylbut-1-en-1-yl, 3-methylbut-1-en-1-yl, 1-methylbut-2-en-1-yl, 2-methylbut-2-en-1-yl, 3-methylbut-2-en-1-yl, 1-methylbut-3-en-1-yl, 2-methylbut-3-en-1-yl, 3-methylbut-3-en-1-yl, 1,1-dimethylprop-2-en-1-yl, 1,2-dimethylprop-1-en-1-yl, 1,2-dimethylprop-2-en-1-yl, 1-ethylprop-1-en-2-yl, 1-ethylprop-2-en-1-yl, n-hex-1-en-1-yl, n-hex-2-en-1-yl, n-hex-3-en-1-yl, n-hex-4-en-1-yl, n-hex-5-en-1-yl, 1-methylpent-1-en-1-yl, 2-methylpent-1-en-1-yl, 3-methylpent-1-en-1-yl, 4-methylpent-1-en-1-yl, 1-methylpent-2-en-1-yl, 2-methylpent-2-en-1-yl, 3-methylpent-2-en-1-yl, 4-methylpent-2-en-1-yl,

1-methylpent-3-en-1-yl, 2-methylpent-3-en-1-yl, 3-methylpent-3-en-1-yl, 4-methylpent-3-en-1-yl, 1-methylpent-4-en-1-yl, 2-methylpent-4-en-1-yl, 3-methylpent-4-en-1-yl, 4-methylpent-4-en-1-yl, 1,1-dimethylbut-2-en-1-yl, 1,1-dimethylbut-3-en-1-yl, 1,2-dimethylbut-1-en-1-yl, 1,2-dimethylbut-2-en-1-yl, 1,2-dimethylbut-3-en-1-yl, 1,3-dimethylbut-1-en-1-yl, 1,3-dimethylbut-2-en-1-yl, 1,3-dimethylbut-3-en-1-yl, 2,2-dimethylbut-3-en-1-yl, 2,3-dimethylbut-1-en-1-yl, 2,3-dimethylbut-2-en-1-yl, 2,3-dimethylbut-3-en-1-yl, 3,3-dimethylbut-1-en-1-yl, 3,3-dimethylbut-2-en-1-yl, 1-ethylbut-1-en-1-yl, 1-ethylbut-2-en-1-yl, 1-ethylbut-3-en-1-yl, 2-ethylbut-1-en-1-yl, 2-ethylbut-2-en-1-yl, 2-ethylbut-3-en-1-yl, 1,1,2-trimethylprop-2-en-1-yl, 1-ethyl-1-methylprop-2-en-1-yl, 1-ethyl-2-methylprop-1-en-1-yl or 1-ethyl-2-methylprop-2-en-1-yl;

- C_2-C_4-haloalkenyl: unsaturated straight-chain or branched hydrocarbon radicals having 2 to 4 carbon atoms and a double bond in any position (as mentioned above), where some or all of the hydrogen atoms in these groups are replaced by halogen atoms as mentioned above, in particular by fluorine, chlorine and bromine, i.e., for example, 2-chloroallyl, 3-chloroallyl, 2,3-dichloroallyl, 3,3-dichloroallyl, 2,3,3-trichloroallyl, 2,3-dichlorobut-2-enyl, 2-bromoallyl, 3-bromoallyl, 2,3-dibromoallyl, 3,3-dibromoallyl, 2,3,3-tribromoallyl or 2,3-dibromobut-2-enyl;

- C_2-C_6-haloalkenyl: C_2-C_6-alkenyl as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, for example the radicals mentioned under C_2-C_4-haloalkenyl;

- C_2-C_4-alkynyl: straight-chain or branched hydrocarbon groups having 2 to 4 carbon atoms and a triple bond in any position, for example ethynyl, 1-propynyl, 2-propynyl (=propargyl), 1-butynyl, 2-butynyl, 3-butynyl and 1-methyl-2-propynyl;

- C_2-C_6-alkynyl: straight-chain or branched hydrocarbon groups having 2 to 6 carbon atoms and a triple bond in any position, for example ethynyl, prop-1-yn-1-yl, prop-2-yn-1-yl, n-but-1-yn-1-yl, n-but-1-yn-3-yl, n-but-1-yn-4-yl, n-but-2-yn-1-yl, n-pent-1-yn-1-yl, n-pent-1-yn-3-yl, n-pent-1-yn-4-yl, n-pent-1-yn-5-yl, n-pent-2-yn-1-yl, n-pent-2-yn-4-yl, n-pent-2-yn-5-yl, 3-methylbut-1-yn-3-yl, 3-methylbut-1-yn-4-yl, n-hex-1-yn-1-yl, n-hex-1-yn-3-yl, n-hex-1-yn-4-yl, n-hex-1-yn-5-yl, n-hex-1-yn-6-yl, n-hex-2-yn-1-yl, n-hex-2-yn-4-yl, n-hex-2-yn-5-yl, n-hex-2-yn-6-yl, n-hex-3-yn-1-yl, n-hex-3-yn-2-yl, 3-methylpent-1-yn-1-yl, 3-methylpent-1-yn-3-yl, 3-methylpent-1-yn-4-yl, 3-methylpent-1-yn-5-yl, 4-methylpent-1-yn-1-yl, 4-methylpent-2-yn-4-yl and 4-methylpent-2-yn-5-yl;

- C_2-C_4-haloalkynyl: unsaturated straight-chain or branched hydrocarbon radicals having 2 to 4 carbon atoms and a triple bond in any position (as mentioned above), where some or all of the hydrogen atoms in these groups may be replaced by halogen atoms as mentioned above, in particular by fluorine, chlorine and bromine, i.e., for example, 1,1-difluoroprop-2-yn-1-yl, 4-fluorobut-2-yn-1-yl, 4-chlorobut-2-yn-1-yl or 1,1-difluorobut-2-yn-1-yl,

- C_2-C_6-haloalkynyl: C_2-C_6-alkynyl as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, for example the radicals mentioned under C_2-C_4-haloalkynyl;

- C_1-C_4-alkoxy: OCH_3, OC_2H_5, OCH_2-C_2H_5, $OCH(CH_3)_2$, n-butoxy, $OCH(CH_3)$-C_2H_5, OCH_2-$CH(CH_3)_2$ or $OC(CH_3)_3$;

- C_1-C_4-haloalkoxy: a C_1-C_4-alkoxy radical as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e., for example, OCH_2F, $OCHF_2$, OCF_3, OCH_2Cl, $OCH(Cl)_2$, $OC(Cl)_3$, chlorofluoromethoxy, dichlorofluoromethoxy, chlorodifluoromethoxy, 2-fluoroethoxy, 2-chloroethoxy, 2-bromoethoxy, 2-iodoethoxy, 2,2-difluoroethoxy, 2,2,2-trifluoroethoxy, 2-chloro-2-fluoroethoxy, 2-chloro-2,2-difluoroethoxy, 2,2-dichloro-2-fluoroethoxy, 2,2,2-trichloroethoxy, OC_2F_5, 2-fluoropropoxy, 3-fluoropropoxy, 2,2-difluoropropoxy, 2,3-difluoropropoxy, 2-chloropropoxy, 3-chloropropoxy, 2,3-dichloropropoxy, 2-bromopropoxy, 3-bromopropoxy, 3,3,3-trifluoropropoxy, 3,3,3-trichloropropoxy, OCH_2–C_2F_5, OCF_2-C_2F_5, 1-(CH_2F)-2-fluoroethoxy, 1-(CH_2Cl)-2-chloroethoxy, 1-(CH_2Br)-2-bromoethoxy, 4-fluorobutoxy, 4-chlorobutoxy, 4-bromobutoxy or nonafluorobutoxy, preferably $OCHF_2$, OCF_3, dichlorofluoromethoxy, chlorodifluoromethoxy or 2,2,2–trifluoroethoxy;

- C_3-C_6-cycloalkyl: cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl;

- C_3-C_6-cycloalkyl which is unsubstituted or mono- or polysubstituted by halogen: a C_3-C_6-cycloalkyl radical as mentioned above which is unsubstituted or partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e., for example, 1-chlorocyclopropyl, 1-fluorocyclopropyl, 2-chlorocyclopropyl, 2-fluorocyclopropyl, 4-chlorocyclohexyl, 4-bromocyclohexyl;

- phenyl-C_1-C_4-alkyl: C_1-C_4-alkyl which is substituted by phenyl, for example benzyl, 1- or 2-phenylethyl, 1-, 2- or 3-phenylpropyl, where the phenyl moiety may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected

from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

- phenyl-C_1-C_4-haloalkyl: C_1-C_4-haloalkyl which is substituted by phenyl, where the phenyl moiety may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

- phenyl-C_2-C_4-alkenyl: C_2-C_4-alkenyl which is substituted by phenyl, for example 1- or 2-phenylethenyl, 1-phenylprop-2-en-1-yl, 3-phenyl-1-propen-1-yl, 3-phenyl-2-propen-1-yl, 4-phenyl-1-buten-1-yl or 4-phenyl-2-buten-1-yl; where the phenyl moiety may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

- phenyl-C_2-C_4-haloalkenyl: C_2-C_4-haloalkenyl which is substituted by phenyl, where the phenyl moiety may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

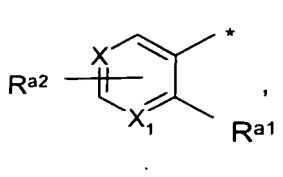
- phenyl-C_2-C_4-alkynyl: C_2-C_4-alkynyl, which is substituted by phenyl, for example 1-phenyl-2-propyn-1-yl, 3-phenyl-1-propyn-1-yl, 3-phenyl-2-propyn-1-yl, 4-phenyl-1-butyn-1-yl or 4-phenyl-2-butyn-1-yl; where the phenyl moiety of phenyl-C_2-C_4-alkynyl may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

- phenyl-C_2-C_4-haloalkynyl: C_2-C_4-haloalkynyl which is substituted by phenyl, where the phenyl moiety may be unsubstituted or may carry 1, 2 or 3 radicals R^b, where R^b is selected from the group consisting of halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl and C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen;

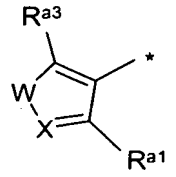
- an at least monounsaturated heterocycle having 5 or 6 ring members: a monocyclic heterocycle which has one, two or three ring members selected from

the group consisting of O, S, S(=O), $S(=O)_2$ and N and which is at least monounsaturated or fully unsaturated, i.e. aromatic. Examples are 2-furyl and 3-furyl, thienyl, such as 2-thienyl and 3-thienyl, pyrrolyl, such as 2-pyrrolyl and 3-pyrrolyl, isoxazolyl, such as 3-isoxazolyl, 4-isoxazolyl and 5-isoxazolyl, isothiazolyl, such as 3-isothiazolyl, 4-isothiazolyl and 5-isothiazolyl, pyrazolyl, such as 3-pyrazolyl, 4-pyrazolyl and 5-pyrazolyl, oxazolyl, such as 2-oxazolyl, 4-oxazolyl and 5-oxazolyl, thiazolyl, such as 2-thiazolyl, 4-thiazolyl and 5-thiazolyl, imidazolyl, such as 2-imidazolyl and 4-imidazolyl, oxadiazolyl, such as 1,2,4-oxadiazol-3-yl, 1,2,4-oxadiazol-5-yl and 1,3,4-oxadiazol-2-yl, thiadiazolyl, such as 1,2,4-thiadiazol-3-yl, 1,2,4-thiadiazol-5-yl and 1,3,4-thiadiazol-2-yl, triazolyl, such as 1,2,4-triazol-1-yl, 1,2,4-triazol-3-yl and 1,2,4-triazol-4-yl, pyridynyl, such as 2-pyridynyl, 3-pyridynyl and 4-pyridynyl, pyridazynyl, such as 3-pyridazynyl and 4-pyridazynyl, pyrimidynyl, such as 2-pyrimidynyl, 4-pyrimidynyl and 5-pyrimidynyl, 2-pyrazynyl, 1,3,5-triazin-2-yl and 1,2,4-triazin-3-yl, 1,2-dihydrofuran-2-yl, 1,2-dihydrofuran-3-yl, 1,2-dihydrothiophen-2-yl, 1,2-dihydrothiophen-3-yl, 2,3-dihydropyran-4-yl, 2,3-dihydropyran-5-yl, 2,3-dihydropyran-6-yl, 5,6-dihydro-4H-pyran-3-yl, 2,3-dihydrothiopyran-4-yl, 2,3-dihydrothiopyran-5-yl, 2,3-dihydrothiopyran-6-yl, 5,6-dihydro-4H-thiopyran-3-yl, 5,6-dihydro-[1,4]dioxin-2-yl, 5,6-dihydro-[1,4]dithiin-2-yl or 5,6-dihydro[1,4]oxathiin-3-yl, in particular pyridyl, thiazolyl and pyrazolyl.

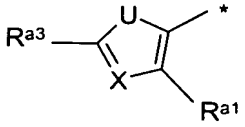
With a view to the fungicidal activity of the compounds I according to the invention, preference is given to those compounds of the formula I in which A is a cyclic radical A-1 to A-6:



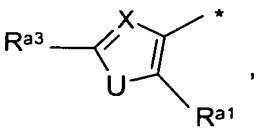
(A-1)



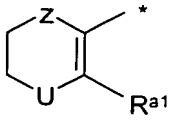
(A-2)



(A-3)

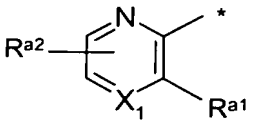


(A-4)



(A-5)

or



(A-6)

in which * denotes the point of attachment to C(=Y) and the variables are as defined below:

X, X_1 are each independently of one another N or CR^c, where R^c is H or has one of the meanings mentioned for R^b. In particular R^c is hydrogen;

W is S or N-R^{a4}, where R^{a4} is hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl or phenyl which may be unsubstituted or may carry 1, 2 or 3 radicals R^b; R^{a4} in particular is hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl;

U is oxygen or sulfur;

Z is S, S(=O), $S(=O)_2$ or CH_2, particularly preferably S or CH_2;

R^{a1} is hydrogen, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy or halogen, particularly preferably hydrogen, halogen, C_1-C_2-alkyl, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy or C_1-C_2-fluoroalkyl;

R^{a2} are each independently of one another hydrogen, halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen; and

R^{a3} is hydrogen, halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen, particularly preferably hydrogen, fluorine, chlorine or C_1-C_4-alkyl.

In the radicals of the formula A-1, A-2, A-3, A-4, A-5 and A-6, the variables R^{a1}, R^{a2} and R^{a3} have in particular the following meanings:

R^{a1} is hydrogen, halogen, in particular fluorine or chlorine, C_1-C_4-alkyl or C_1-C_4-haloalkyl, particularly preferably halogen, trifluoromethyl or methyl;

R^{a2} is hydrogen; and

R^{a3} is halogen, in particular fluorine or chlorine, or methyl.

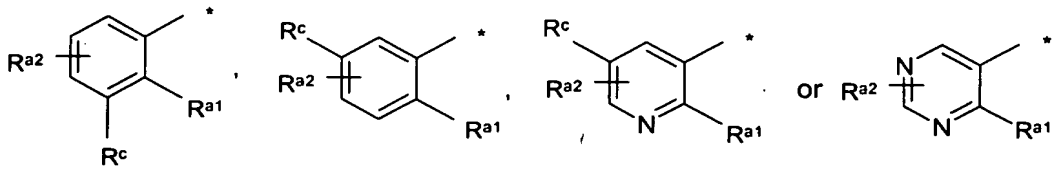
In the formula A-2, W is preferably a group N-R^{a4}, where R^{a4} is as defined above and has in particular the meanings given as being preferred.

If X in the formulae A-1, A-2, A-3 or A-4 is a group C-R^c, R^c is preferably hydrogen.

In the formulae A-2, A-3 and A-4, X is in particular N. In the formula A-1, X is in particular CH.

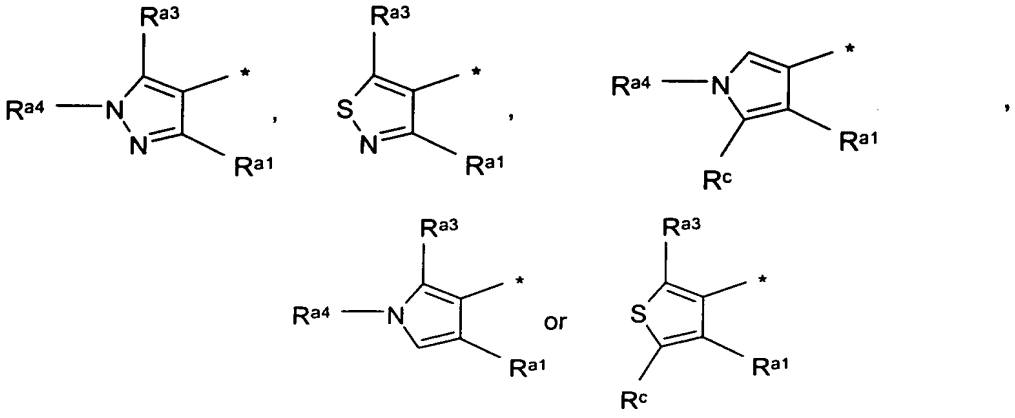
In the formulae A-1 and A-6, X_1 is in particular N.

Examples for radicals A-1 are in particular:



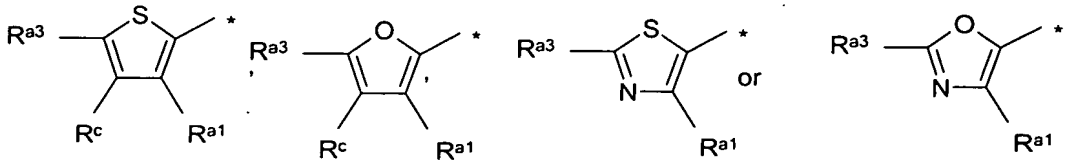
in which *, R^{a1}, R^{a2} and R^c have the meanings mentioned above, in particular the preferred meanings.

Examples for radicals A-2 are in particular:



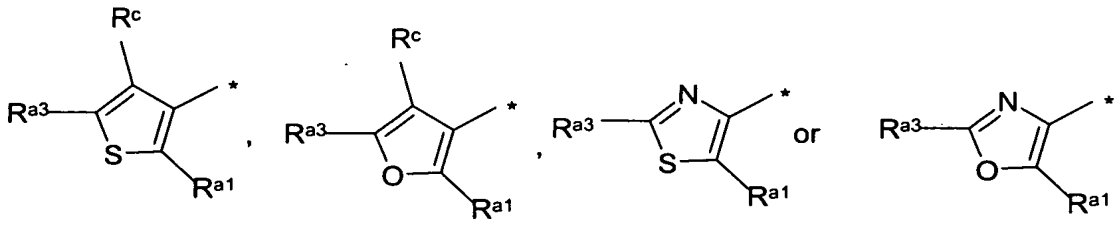
in which *, R^{a1}, R^{a3}, R^{a4} and R^c have the meanings mentioned above, in particular the preferred meanings.

Examples for radicals A-3 are in particular:



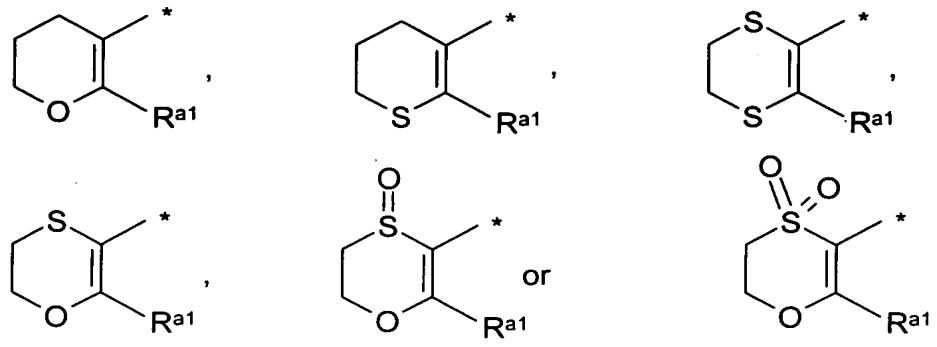
in which *, R^{a1}, R^{a3} and R^c have the meanings mentioned above, in particular the preferred meanings.

Examples for radicals A-4 are in particular:



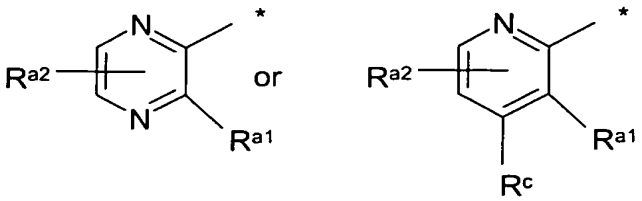
in which *, R^{a1}, R^{a3} and R^c have the meanings mentioned above, in particular the preferred meanings.

Examples for radicals A-5 are in particular:



in which * and R^{a1} have the meanings mentioned above, in particular the preferred meanings.

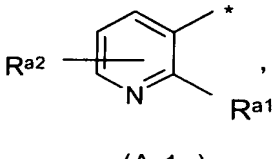
Examples for radicals A-6 are in particular:



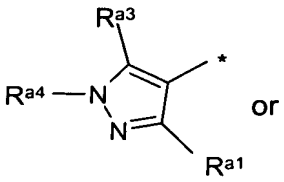
in which *, R^{a1}, R^{a2} and R^c have the meanings mentioned above, in particular the preferred meanings.

Examples for radicals A are: 2-chlorophenyl, 2-trifluoromethylphenyl, 2-difluoromethylphenyl, 2-methylphenyl, 2-chloropyridin-3-yl, 2-trifluoromethylpyridin-3-yl, 2-difluoromethylpyridin-3-yl, 2-methylpyridin-3-yl, 4-methylpyrimidin-5-yl, 4-trifluoromethylpyrimidin-5-yl, 4-difluoromethylpyrimidin-5-yl, 1-methyl-3-trifluoromethylpyrazol-4-yl, 1-methyl-3-difluoromethylpyrazol-4-yl, 1,3-dimethylpyrazol-4-yl, 1-methyl-3-trifluoromethyl-5-fluoropyrazol-4-yl, 1-methyl-3-difluoromethyl-5-fluoropyrazol-4-yl, 1-methyl-3-trifluoromethyl-5-chloropyrazol-4-yl, 1-methyl-3-trifluoromethylpyrrol-4-yl, 1-methyl-3-difluoromethylpyrrol-4-yl, 2-methyl-4-trifluoromethylthiazol-5-yl, 2-methyl-4-difluoromethylthiazol-5-yl, 2,4-dimethylthiazol-5-yl, 2-methyl-5-trifluoromethylthiazol-4-yl, 2-methyl-5-difluoromethylthiazol-4-yl, 2,5-dimethylthiazol-4-yl, 2-methyl-4-trifluoromethyloxazol-5-yl, 2-methyl-4-difluoromethyloxazol-5-yl, 2,4-dimethyloxazol-5-yl, 2-trifluoromethylthiophen-3-yl, 5-methyl-2-trifluoromethylthiophen-3-yl, 2-methylthiophen-3-yl, 2,5-dimethylthiophen-3-yl, 3-trifluoromethylthiophen-2-yl, 3-methylthiophen-2-yl, 3,5-dimethylthiophen-2-yl, 5-methyl-3-trifluoromethyl-thiophen-2-yl, 2-trifluoromethylfuran-3-yl, 5-methyl-2-trifluoromethylfuran-3-yl, 2-methylfuran-3-yl, 2,5-dimethylfuran-3-yl, 2-methyl-5,6-dihydro[1,4]oxathiin-3-yl, 2-methyl-5,6-dihydro-4H-thiopyran-3-yl.

With particular preference, A is a radical A-1a, A-2a or A-3a,

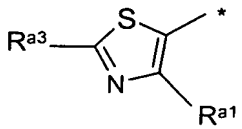


(A-1a)



(A-2a)

or



(A-3a)

in which *, R^{a1}, R^{a2}, R^{a3} and R^{a4} have the meanings given above, in particular the preferred meanings.

Preference is given to radicals A-1a where R^{a1} is hydrogen, halogen, C_1-C_2-alkyl, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy or C_1-C_2-fluoroalkyl; in particular hydrogen, chlorine, bromine, fluorine, methyl, ethyl, methoxy, trifluoromethyl, difluoromethyl, trifluoromethoxy or difluoromethoxy, very particularly preferably fluorine, bromine, chlorine, methyl or trifluoromethyl, and especially chlorine; where R^{a2} is hydrogen, halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen, especially hydrogen.

Preference is given to radicals A-2a where: R^{a1} is hydrogen, halogen, C_1-C_2-alkyl, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy or C_1-C_2-fluoroalkyl, in particular hydrogen, chlorine, bromine, fluorine, methyl, ethyl, methoxy, trifluoromethyl, difluoromethyl, trifluoromethoxy or difluoromethoxy, very particularly preferably fluorine, bromine, chlorine, methyl or trifluoromethyl, especially trifluoromethyl; R^{a3} is hydrogen, halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen, preferably hydrogen, halogen and C_1-C_4-alkyl, in particular halogen, hydrogen; and especially hydrogen; and R^{a4} is hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl or phenyl, which may be unsubstituted or may carry 1, 2 or 3 radicals R^b, preferably hydrogen, C_1-C_4-alkyl or C_1-C_4-haloalkyl, especially methyl.

Preference is given to radicals A-3a where: R^{a1} is hydrogen, halogen, C_1-C_2-alkyl, C_1-C_2-alkoxy, C_1-C_2-fluoroalkoxy or C_1-C_2-fluoroalkyl, in particular hydrogen, chlorine, bromine, fluorine, methyl, ethyl, methoxy, trifluoromethyl, difluoromethyl, trifluoromethoxy or difluoromethoxy, very particularly preferably fluorine, bromine, chlorine, methyl or trifluoromethyl, especially trifluoromethyl; R^{a3} is hydrogen, halogen, nitro, CN, C_1-C_4-alkyl, C_3-C_6-cycloalkyl, C_2-C_4-alkenyl, C_2-C_4-alkynyl, C_1-C_4-alkoxy, where the 5 last-mentioned groups may be substituted by halogen, preferably hydrogen, halogen or C_1-C_4-alkyl, in particular hydrogen, methyl and especially methyl.

With particular preference, A is selected from the group consisting of:
A-1a where R^{a1} = halogen, especially chlorine and R^{a2} = hydrogen;
A-2a where R^{a1} = C_1-C_2-fluoroalkyl, especially trifluoromethyl, R^{a3} = hydrogen and R^{a4} = C_1-C_4-alkyl, especially methyl; and
A-3a where R^{a1} = C_1-C_2-fluoroalkyl, especially trifluoromethyl, and R^{a3} = C_1-C_4-alkyl, especially methyl.

With a view to their fungicidal activity, preference is given to (hetero)cyclylcarboxanilides of the formula I in which the variables Y, R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m independently of one another and preferably in combination have the following meanings:

Y is O;

R^1 is hydrogen, OH, C_1-C_4-alkyl, in particular H, OH or methyl and especially H;

R^2 is C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, C_1-C_4-haloalkoxy, nitro, cyano or halogen; particularly preferably C_1-C_4-alkyl, C_1-C_4-alkoxy, nitro, cyano or halogen

and especially methyl, methoxy, fluorine, chlorine, bromine, nitro or cyano.

n is 0 or 1, particularly preferably 0;

R^{3m}, R^{4m} are each independently of one another hydrogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_3-C_6-cycloalkyl or C_3-C_6-halocycloalkyl, phenyl, which may be unsubstituted or may carry one, two or three radicals R^b; preferably hydrogen or C_1-C_4-alkyl; especially: R^{31} and R^{41} are each independently of one another hydrogen, methyl, ethyl;

m is 1;

R^5 is hydrogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_3-C_6-cycloalkyl, C_3-C_6-halocycloalkyl, phenyl, phenyl-C_1-C_4-alkyl, phenyl-C_1-C_4-haloalkyl, where phenyl in the three last-mentioned radicals may be unsubstituted or may carry one, two or three radicals R^b; preferably hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, phenyl, which may be unsubstituted or may carry one, two or three radicals R^b;

R^6 is C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_3-C_6-cycloalkyl, C_3-C_6-halocycloalkyl, C_2-C_6-alkenyl, C_2-C_6-haloalkenyl, C_2-C_4-alkynyl, C_2-C_4-haloalkynyl, phenyl-C_1-C_2-alkyl or phenyl, where phenyl in the two last-mentioned radicals may be unsubstituted or may carry one or two halogen groups, especially fluorine or chlorine.

Particular preference is furthermore given to the (heterocyclyl)carboxanilides of the formula I, in which R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m have the meanings mentioned above and in particular the preferred meanings, Y is oxygen and A is selected from the group consisting of:

A-1, where X and X_1 are each nitrogen, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, trifluoromethyl, chlorine, bromine or fluorine; R^{a2} has the meanings mentioned above and is especially hydrogen;

A-2, where X is N, W is S, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen;

A-2, where X is CH, W is N-R^{a4}, where R^{a4} is C_1-C_4-alkyl, especially methyl, R^{a1} has the

meanings mentioned above, in particular the preferred meanings and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen;

A-3, where U is O, X is N, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen or methyl;

A-3, where U is S, X is CH, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen or methyl;

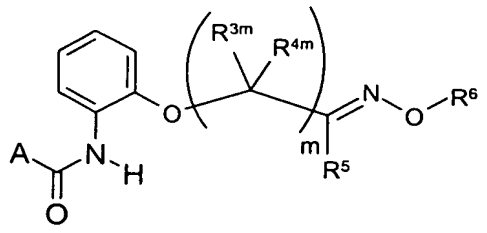
A-4, where U is O, X is CH or N, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen or methyl;

A-4, where U is S, X is CH or N, R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl; R^{a3} has the meanings mentioned above, in particular the preferred meanings, and is especially hydrogen or methyl;

A-5, where U is oxygen, Z is CH_2, S, S(=O) or $S(=O)_2$ and R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl;

A-6, where X_1 is nitrogen, R^{a2} has the meanings mentioned above and is especially hydrogen; R^{a1} has the meanings mentioned above, in particular the preferred meanings, and is especially methyl, fluorine, chlorine, bromine or trifluoromethyl.

In particular with a view to their use as fungicides and active compounds for controlling pests, preference is given to the individual compounds of the formula Ia (compounds I where R^1 = H, n = 0) compiled in tables 1 to 42 below, where the variables R^5, R^6, R^{3m}, R^{4m} and m each have the meanings given in one row of table A and the variable A has the meaning given in the respective table. In the case of compounds containing double bonds this comprises both the isomerically pure E isomers, Z isomers and isomer mixtures.



(IA)

Table A:

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
1	H	CH_3	$-CH_2-$
2	H	C_2H_5	$-CH_2-$
3	H	$CH_2CH_2CH_3$	$-CH_2-$
4	H	$CH(CH_3)_2$	$-CH_2-$
5	H	$CH_2CH_2CH_2CH_3$	$-CH_2-$
6	H	i-C_4H_9	$-CH_2-$
7	H	s-C_4H_9	$-CH_2-$
8	H	$C(CH_3)_3$	$-CH_2-$
9	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
10	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
11	H	cyclopentyl	$-CH_2-$
12	H	cyclohexyl	$-CH_2-$
13	H	allyl	$-CH_2-$
14	H	but-2-en-1-yl	$-CH_2-$
15	H	4-chlorobut-2-en-1-yl	$-CH_2-$
16	H	propargyl	$-CH_2-$
17	H	C_6H_5	$-CH_2-$
18	H	$C_6H_5CH_2$	$-CH_2-$
19	H	2-phenyleth-1-yl	$-CH_2-$
20	H	4-Cl-C_6H_4	$-CH_2-$
21	H	4-F-C_6H_4	$-CH_2-$
22	H	CH_3	$-CH(CH_3)-$
23	H	C_2H_5	$-CH(CH_3)-$
24	H	$CH_2CH_2CH_3$	$-CH(CH_3)-$
25	H	$CH(CH_3)_2$	$-CH(CH_3)-$
26	H	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
27	H	i-C_4H_9	$-CH(CH_3)-$
28	H	s-C_4H_9	$-CH(CH_3)-$
29	H	$C(CH_3)_3$	$-CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
30	H	$CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)$-
31	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)$-
32	H	cyclopentyl	-$CH(CH_3)$-
33	H	cyclohexyl	-$CH(CH_3)$-
34	H	allyl	-$CH(CH_3)$-
35	H	but-2-en-1-yl	-$CH(CH_3)$-
36	H	4-chlorobut-2-en-1-yl	-$CH(CH_3)$-
37	H	propargyl	-$CH(CH_3)$-
38	H	C_6H_5	-$CH(CH_3)$-
39	H	$C_6H_5CH_2$	-$CH(CH_3)$-
40	H	2-phenyleth-1-yl	-$CH(CH_3)$-
41	H	4-Cl-C_6H_4	-$CH(CH_3)$-
42	H	4-F-C_6H_4	-$CH(CH_3)$-
43	H	CH_3	-$CH(C_2H_5)$-
44	H	C_2H_5	-$CH(C_2H_5)$-
45	H	$CH_2CH_2CH_3$	-$CH(C_2H_5)$-
46	H	$CH(CH_3)_2$	-$CH(C_2H_5)$-
47	H	$CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
48	H	i-C_4H_9	-$CH(C_2H_5)$-
49	H	s-C_4H_9	-$CH(C_2H_5)$-
50	H	$C(CH_3)_3$	-$CH(C_2H_5)$-
51	H	$CH_2CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
52	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
53	H	cyclopentyl	-$CH(C_2H_5)$-
54	H	cyclohexyl	-$CH(C_2H_5)$-
55	H	allyl	-$CH(C_2H_5)$-
56	H	but-2-en-1-yl	-$CH(C_2H_5)$-
57	H	4-chlorobut-2-en-1-yl	-$CH(C_2H_5)$-
58	H	propargyl	-$CH(C_2H_5)$-
59	H	C_6H_5	-$CH(C_2H_5)$-
60	H	$C_6H_5CH_2$	-$CH(C_2H_5)$-
61	H	2-phenyleth-1-yl	-$CH(C_2H_5)$-
62	H	4-Cl-C_6H_4	-$CH(C_2H_5)$-
63	H	4-F-C_6H_4	-$CH(C_2H_5)$-
64	H	CH_3	-$C(CH_3)_2$-
65	H	C_2H_5	-$C(CH_3)_2$-
66	H	$CH_2CH_2CH_3$	-$C(CH_3)_2$-
67	H	$CH(CH_3)_2$	-$C(CH_3)_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
68	H	$CH_2CH_2CH_2CH_3$	$-C(CH_3)_2-$
69	H	i-C_4H_9	$-C(CH_3)_2-$
70	H	s-C_4H_9	$-C(CH_3)_2-$
71	H	$C(CH_3)_3$	$-C(CH_3)_2-$
72	H	$CH_2CH_2CH_2CH_2CH_3$	$-C(CH_3)_2-$
73	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-C(CH_3)_2-$
74	H	cyclopentyl	$-C(CH_3)_2-$
75	H	cyclohexyl	$-C(CH_3)_2-$
76	H	allyl	$-C(CH_3)_2-$
77	H	but-2-en-1-yl	$-C(CH_3)_2-$
78	H	4-chlorobut-2-en-1-yl	$-C(CH_3)_2-$
79	H	propargyl	$-C(CH_3)_2-$
80	H	C_6H_5	$-C(CH_3)_2-$
81	H	$C_6H_5CH_2$	$-C(CH_3)_2-$
82	H	2-phenyleth-1-yl	$-C(CH_3)_2-$
83	H	4-Cl-C_6H_4	$-C(CH_3)_2-$
84	H	4-F-C_6H_4	$-C(CH_3)_2-$
85	H	CH_3	$-CH_2CH_2-$
86	H	C_2H_5	$-CH_2CH_2-$
87	H	$CH_2CH_2CH_3$	$-CH_2CH_2-$
88	H	$CH(CH_3)_2$	$-CH_2CH_2-$
89	H	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
90	H	i-C_4H_9	$-CH_2CH_2-$
91	H	s-C_4H_9	$-CH_2CH_2-$
92	H	$C(CH_3)_3$	$-CH_2CH_2-$
93	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
94	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
95	H	cyclopentyl	$-CH_2CH_2-$
96	H	cyclohexyl	$-CH_2CH_2-$
97	H	allyl	$-CH_2CH_2-$
98	H	but-2-en-1-yl	$-CH_2CH_2-$
99	H	4-chlorobut-2-en-1-yl	$-CH_2CH_2-$
100	H	propargyl	$-CH_2CH_2-$
101	H	C_6H_5	$-CH_2CH_2-$
102	H	$C_6H_5CH_2$	$-CH_2CH_2-$
103	H	2-phenyleth-1-yl	$-CH_2CH_2-$
104	H	4-Cl-C_6H_4	$-CH_2CH_2-$
105	H	4-F-C_6H_4	$-CH_2CH_2-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}_t))_m$
106	H	CH_3	$-CH(CH_3)CH_2-$
107	H	C_2H_5	$-CH(CH_3)CH_2-$
108	H	$CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
109	H	$CH(CH_3)_2$	$-CH(CH_3)CH_2-$
110	H	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
111	H	i-C_4H_9	$-CH(CH_3)CH_2-$
112	H	s-C_4H_9	$-CH(CH_3)CH_2-$
113	H	$C(CH_3)_3$	$-CH(CH_3)CH_2-$
114	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
115	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
116	H	cyclopentyl	$-CH(CH_3)CH_2-$
117	H	cyclohexyl	$-CH(CH_3)CH_2-$
118	H	allyl	$-CH(CH_3)CH_2-$
119	H	but-2-en-1-yl	$-CH(CH_3)CH_2-$
120	H	4-chlorobut-2-en-1-yl	$-CH(CH_3)CH_2-$
121	H	propargyl	$-CH(CH_3)CH_2-$
122	H	C_6H_5	$-CH(CH_3)CH_2-$
123	H	$C_6H_5CH_2$	$-CH(CH_3)CH_2-$
124	H	2-phenyleth-1-yl	$-CH(CH_3)CH_2-$
125	H	4-Cl-C_6H_4	$-CH(CH_3)CH_2-$
126	H	4-F-C_6H_4	$-CH(CH_3)CH_2-$
127	H	CH_3	$-CH_2CH(CH_3)-$
128	H	C_2H_5	$-CH_2CH(CH_3)-$
129	H	$CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
130	H	$CH(CH_3)_2$	$-CH_2CH(CH_3)-$
131	H	$CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
132	H	i-C_4H_9	$-CH_2CH(CH_3)-$
133	H	s-C_4H_9	$-CH_2CH(CH_3)-$
134	H	$C(CH_3)_3$	$-CH_2CH(CH_3)-$
135	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
136	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
137	H	cyclopentyl	$-CH_2CH(CH_3)-$
138	H	cyclohexyl	$-CH_2CH(CH_3)-$
139	H	allyl	$-CH_2CH(CH_3)-$
140	H	but-2-en-1-yl	$-CH_2CH(CH_3)-$
141	H	4-chlorobut-2-en-1-yl	$-CH_2CH(CH_3)-$
142	H	propargyl	$-CH_2CH(CH_3)-$
143	H	C_6H_5	$-CH_2CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
144	H	$C_6H_5CH_2$	$-CH_2CH(CH_3)-$
145	H	2-phenyleth-1-yl	$-CH_2CH(CH_3)-$
146	H	4-Cl-C_6H_4	$-CH_2CH(CH_3)-$
147	H	4-F-C_6H_4	$-CH_2CH(CH_3)-$
148	H	CH_3	$-CH(CH_3)CH(CH_3)-$
149	H	C_2H_5	$-CH(CH_3)CH(CH_3)-$
150	H	$CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
151	H	$CH(CH_3)_2$	$-CH(CH_3)CH(CH_3)-$
152	H	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
153	H	i-C_4H_9	$-CH(CH_3)CH(CH_3)-$
154	H	s-C_4H_9	$-CH(CH_3)CH(CH_3)-$
155	H	$C(CH_3)_3$	$-CH(CH_3)CH(CH_3)-$
156	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
157	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
158	H	cyclopentyl	$-CH(CH_3)CH(CH_3)-$
159	H	cyclohexyl	$-CH(CH_3)CH(CH_3)-$
160	H	allyl	$-CH(CH_3)CH(CH_3)-$
161	H	but-2-en-1-yl	$-CH(CH_3)CH(CH_3)-$
162	H	4-chlorobut-2-en-1-yl	$-CH(CH_3)CH(CH_3)-$
163	H	propargyl	$-CH(CH_3)CH(CH_3)-$
164	H	C_6H_5	$-CH(CH_3)CH(CH_3)-$
165	H	$C_6H_5CH_2$	$-CH(CH_3)CH(CH_3)-$
166	H	2-phenyleth-1-yl	$-CH(CH_3)CH(CH_3)-$
167	H	4-Cl-C_6H_4	$-CH(CH_3)CH(CH_3)-$
168	H	4-F-C_6H_4	$-CH(CH_3)CH(CH_3)-$
169	H	CH_3	$-CH_2CH_2CH_2-$
170	H	C_2H_5	$-CH_2CH_2CH_2-$
171	H	$CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
172	H	$CH(CH_3)_2$	$-CH_2CH_2CH_2-$
173	H	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
174	H	i-C_4H_9	$-CH_2CH_2CH_2-$
175	H	s-C_4H_9	$-CH_2CH_2CH_2-$
176	H	$C(CH_3)_3$	$-CH_2CH_2CH_2-$
177	H	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
178	H	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
179	H	cyclopentyl	$-CH_2CH_2CH_2-$
180	H	cyclohexyl	$-CH_2CH_2CH_2-$
181	H	allyl	$-CH_2CH_2CH_2-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
182	H	but-2-en-1-yl	$-CH_2CH_2CH_2-$
183	H	4-chlorobut-2-en-1-yl	$-CH_2CH_2CH_2-$
184	H	propargyl	$-CH_2CH_2CH_2-$
185	H	C_6H_5	$-CH_2CH_2CH_2-$
186	H	$C_6H_5CH_2$	$-CH_2CH_2CH_2-$
187	H	2-phenyleth-1-yl	$-CH_2CH_2CH_2-$
188	H	4-Cl-C_6H_4	$-CH_2CH_2CH_2-$
189	H	4-F-C_6H_4	$-CH_2CH_2CH_2-$
190	CH_3	CH_3	$-CH_2-$
191	CH_3	C_2H_5	$-CH_2-$
192	CH_3	$CH_2CH_2CH_3$	$-CH_2-$
193	CH_3	$CH(CH_3)_2$	$-CH_2-$
194	CH_3	$CH_2CH_2CH_2CH_3$	$-CH_2-$
195	CH_3	i-C_4H_9	$-CH_2-$
196	CH_3	s-C_4H_9	$-CH_2-$
197	CH_3	$C(CH_3)_3$	$-CH_2-$
198	CH_3	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
199	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
200	CH_3	cyclopentyl	$-CH_2-$
201	CH_3	cyclohexyl	$-CH_2-$
202	CH_3	allyl	$-CH_2-$
203	CH_3	but-2-en-1-yl	$-CH_2-$
204	CH_3	4-chlorobut-2-en-1-yl	$-CH_2-$
205	CH_3	propargyl	$-CH_2-$
206	CH_3	C_6H_5	$-CH_2-$
207	CH_3	$C_6H_5CH_2$	$-CH_2-$
208	CH_3	2-phenyleth-1-yl	$-CH_2-$
209	CH_3	4-Cl-C_6H_4	$-CH_2-$
210	CH_3	4-F-C_6H_4	$-CH_2-$
211	CH_3	CH_3	$-CH(CH_3)-$
212	CH_3	C_2H_5	$-CH(CH_3)-$
213	CH_3	$CH_2CH_2CH_3$	$-CH(CH_3)-$
214	CH_3	$CH(CH_3)_2$	$-CH(CH_3)-$
215	CH_3	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
216	CH_3	i-C_4H_9	$-CH(CH_3)-$
217	CH_3	s-C_4H_9	$-CH(CH_3)-$
218	CH_3	$C(CH_3)_3$	$-CH(CH_3)-$
219	CH_3	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
220	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)$-
221	CH_3	cyclopentyl	-$CH(CH_3)$-
222	CH_3	cyclohexyl	-$CH(CH_3)$-
223	CH_3	allyl	-$CH(CH_3)$-
224	CH_3	but-2-en-1-yl	-$CH(CH_3)$-
225	CH_3	4-chlorobut-2-en-1-yl	-$CH(CH_3)$-
226	CH_3	propargyl	-$CH(CH_3)$-
227	CH_3	C_6H_5	-$CH(CH_3)$-
228	CH_3	$C_6H_5CH_2$	-$CH(CH_3)$-
229	CH_3	2-phenyleth-1-yl	-$CH(CH_3)$-
230	CH_3	4-Cl-C_6H_4	-$CH(CH_3)$-
231	CH_3	4-F-C_6H_4	-$CH(CH_3)$-
232	CH_3	CH_3	-$CH(C_2H_5)$-
233	CH_3	C_2H_5	-$CH(C_2H_5)$-
234	CH_3	$CH_2CH_2CH_3$	-$CH(C_2H_5)$-
235	CH_3	$CH(CH_3)_2$	-$CH(C_2H_5)$-
236	CH_3	$CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
237	CH_3	i-C_4H_9	-$CH(C_2H_5)$-
238	CH_3	s-C_4H_9	-$CH(C_2H_5)$-
239	CH_3	$C(CH_3)_3$	-$CH(C_2H_5)$-
240	CH_3	$CH_2CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
241	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(C_2H_5)$-
242	CH_3	cyclopentyl	-$CH(C_2H_5)$-
243	CH_3	cyclohexyl	-$CH(C_2H_5)$-
244	CH_3	allyl	-$CH(C_2H_5)$-
245	CH_3	but-2-en-1-yl	-$CH(C_2H_5)$-
246	CH_3	4-chlorobut-2-en-1-yl	-$CH(C_2H_5)$-
247	CH_3	propargyl	-$CH(C_2H_5)$-
248	CH_3	C_6H_5	-$CH(C_2H_5)$-
249	CH_3	$C_6H_5CH_2$	-$CH(C_2H_5)$-
250	CH_3	2-phenyleth-1-yl	-$CH(C_2H_5)$-
251	CH_3	4-Cl-C_6H_4	-$CH(C_2H_5)$-
252	CH_3	4-F-C_6H_4	-$CH(C_2H_5)$-
253	CH_3	CH_3	-$C(CH_3)_2$-
254	CH_3	C_2H_5	-$C(CH_3)_2$-
255	CH_3	$CH_2CH_2CH_3$	-$C(CH_3)_2$-
256	CH_3	$CH(CH_3)_2$	-$C(CH_3)_2$-
257	CH_3	$CH_2CH_2CH_2CH_3$	-$C(CH_3)_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
258	CH_3	i-C_4H_9	-$C(CH_3)_2$-
259	CH_3	s-C_4H_9	-$C(CH_3)_2$-
260	CH_3	$C(CH_3)_3$	-$C(CH_3)_2$-
261	CH_3	$CH_2CH_2CH_2CH_2CH_3$	-$C(CH_3)_2$-
262	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$C(CH_3)_2$-
263	CH_3	cyclopentyl	-$C(CH_3)_2$-
264	CH_3	cyclohexyl	-$C(CH_3)_2$-
265	CH_3	allyl	-$C(CH_3)_2$-
266	CH_3	but-2-en-1-yl	-$C(CH_3)_2$-
267	CH_3	4-chlorobut-2-en-1-yl	-$C(CH_3)_2$-
268	CH_3	propargyl	-$C(CH_3)_2$-
269	CH_3	C_6H_5	-$C(CH_3)_2$-
270	CH_3	$C_6H_5CH_2$	-$C(CH_3)_2$-
271	CH_3	2-phenyleth-1-yl	-$C(CH_3)_2$-
272	CH_3	4-Cl-C_6H_4	-$C(CH_3)_2$-
273	CH_3	4-F-C_6H_4	-$C(CH_3)_2$-
274	CH_3	CH_3	-CH_2CH_2-
275	CH_3	C_2H_5	-CH_2CH_2-
276	CH_3	$CH_2CH_2CH_3$	-CH_2CH_2-
277	CH_3	$CH(CH_3)_2$	-CH_2CH_2-
278	CH_3	$CH_2CH_2CH_2CH_3$	-CH_2CH_2-
279	CH_3	i-C_4H_9	-CH_2CH_2-
280	CH_3	s-C_4H_9	-CH_2CH_2-
281	CH_3	$C(CH_3)_3$	-CH_2CH_2-
282	CH_3	$CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
283	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
284	CH_3	cyclopentyl	-CH_2CH_2-
285	CH_3	cyclohexyl	-CH_2CH_2-
286	CH_3	allyl	-CH_2CH_2-
287	CH_3	but-2-en-1-yl	-CH_2CH_2-
288	CH_3	4-chlorobut-2-en-1-yl	-CH_2CH_2-
289	CH_3	propargyl	-CH_2CH_2-
290	CH_3	C_6H_5	-CH_2CH_2-
291	CH_3	$C_6H_5CH_2$	-CH_2CH_2-
292	CH_3	2-phenyleth-1-yl	-CH_2CH_2-
293	CH_3	4-Cl-C_6H_4	-CH_2CH_2-
294	CH_3	4-F-C_6H_4	-CH_2CH_2-
295	CH_3	CH_3	-$CH(CH_3)CH_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
296	CH_3	C_2H_5	-$CH(CH_3)CH_2$-
297	CH_3	$CH_2CH_2CH_3$	-$CH(CH_3)CH_2$-
298	CH_3	$CH(CH_3)_2$	-$CH(CH_3)CH_2$-
299	CH_3	$CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH_2$-
300	CH_3	i-C_4H_9	-$CH(CH_3)CH_2$-
301	CH_3	s-C_4H_9	-$CH(CH_3)CH_2$-
302	CH_3	$C(CH_3)_3$	-$CH(CH_3)CH_2$-
303	CH_3	$CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH_2$-
304	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH_2$-
305	CH_3	cyclopentyl	-$CH(CH_3)CH_2$-
306	CH_3	cyclohexyl	-$CH(CH_3)CH_2$-
307	CH_3	allyl	-$CH(CH_3)CH_2$-
308	CH_3	but-2-en-1-yl	-$CH(CH_3)CH_2$-
309	CH_3	4-chlorobut-2-en-1-yl	-$CH(CH_3)CH_2$-
310	CH_3	propargyl	-$CH(CH_3)CH_2$-
311	CH_3	C_6H_5	-$CH(CH_3)CH_2$-
312	CH_3	$C_6H_5CH_2$	-$CH(CH_3)CH_2$-
313	CH_3	2-phenyleth-1-yl	-$CH(CH_3)CH_2$-
314	CH_3	4-Cl-C_6H_4	-$CH(CH_3)CH_2$-
315	CH_3	4-F-C_6H_4	-$CH(CH_3)CH_2$-
316	CH_3	CH_3	-$CH_2CH(CH_3)$-
317	CH_3	C_2H_5	-$CH_2CH(CH_3)$-
318	CH_3	$CH_2CH_2CH_3$	-$CH_2CH(CH_3)$-
319	CH_3	$CH(CH_3)_2$	-$CH_2CH(CH_3)$-
320	CH_3	$CH_2CH_2CH_2CH_3$	-$CH_2CH(CH_3)$-
321	CH_3	i-C_4H_9	-$CH_2CH(CH_3)$-
322	CH_3	s-C_4H_9	-$CH_2CH(CH_3)$-
323	CH_3	$C(CH_3)_3$	-$CH_2CH(CH_3)$-
324	CH_3	$CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH(CH_3)$-
325	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH(CH_3)$-
326	CH_3	cyclopentyl	-$CH_2CH(CH_3)$-
327	CH_3	cyclohexyl	-$CH_2CH(CH_3)$-
328	CH_3	allyl	-$CH_2CH(CH_3)$-
329	CH_3	but-2-en-1-yl	-$CH_2CH(CH_3)$-
330	CH_3	4-chlorobut-2-en-1-yl	-$CH_2CH(CH_3)$-
331	CH_3	propargyl	-$CH_2CH(CH_3)$-
332	CH_3	C_6H_5	-$CH_2CH(CH_3)$-
333	CH_3	$C_6H_5CH_2$	-$CH_2CH(CH_3)$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
334	CH_3	2-phenyleth-1-yl	$-CH_2CH(CH_3)-$
335	CH_3	4-Cl-C_6H_4	$-CH_2CH(CH_3)-$
336	CH_3	4-F-C_6H_4	$-CH_2CH(CH_3)-$
337	CH_3	CH_3	$-CH(CH_3)CH(CH_3)-$
338	CH_3	C_2H_5	$-CH(CH_3)CH(CH_3)-$
339	CH_3	$CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
340	CH_3	$CH(CH_3)_2$	$-CH(CH_3)CH(CH_3)-$
341	CH_3	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
342	CH_3	i-C_4H_9	$-CH(CH_3)CH(CH_3)-$
343	CH_3	s-C_4H_9	$-CH(CH_3)CH(CH_3)-$
344	CH_3	$C(CH_3)_3$	$-CH(CH_3)CH(CH_3)-$
345	CH_3	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
346	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH(CH_3)-$
347	CH_3	cyclopentyl	$-CH(CH_3)CH(CH_3)-$
348	CH_3	cyclohexyl	$-CH(CH_3)CH(CH_3)-$
349	CH_3	allyl	$-CH(CH_3)CH(CH_3)-$
350	CH_3	but-2-en-1-yl	$-CH(CH_3)CH(CH_3)-$
351	CH_3	4-chlorobut-2-en-1-yl	$-CH(CH_3)CH(CH_3)-$
352	CH_3	propargyl	$-CH(CH_3)CH(CH_3)-$
353	CH_3	C_6H_5	$-CH(CH_3)CH(CH_3)-$
354	CH_3	$C_6H_5CH_2$	$-CH(CH_3)CH(CH_3)-$
355	CH_3	2-phenyleth-1-yl	$-CH(CH_3)CH(CH_3)-$
356	CH_3	4-Cl-C_6H_4	$-CH(CH_3)CH(CH_3)-$
357	CH_3	4-F-C_6H_4	$-CH(CH_3)CH(CH_3)-$
358	CH_3	CH_3	$-CH_2CH_2CH_2-$
359	CH_3	C_2H_5	$-CH_2CH_2CH_2-$
360	CH_3	$CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
361	CH_3	$CH(CH_3)_2$	$-CH_2CH_2CH_2-$
362	CH_3	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
363	CH_3	i-C_4H_9	$-CH_2CH_2CH_2-$
364	CH_3	s-C_4H_9	$-CH_2CH_2CH_2-$
365	CH_3	$C(CH_3)_3$	$-CH_2CH_2CH_2-$
366	CH_3	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
367	CH_3	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
368	CH_3	cyclopentyl	$-CH_2CH_2CH_2-$
369	CH_3	cyclohexyl	$-CH_2CH_2CH_2-$
370	CH_3	allyl	$-CH_2CH_2CH_2-$
371	CH_3	but-2-en-1-yl	$-CH_2CH_2CH_2-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
372	CH_3	4-chlorobut-2-en-1-yl	$-CH_2CH_2CH_2-$
373	CH_3	propargyl	$-CH_2CH_2CH_2-$
374	CH_3	C_6H_5	$-CH_2CH_2CH_2-$
375	CH_3	$C_6H_5CH_2$	$-CH_2CH_2CH_2-$
376	CH_3	2-phenyleth-1-yl	$-CH_2CH_2CH_2-$
377	CH_3	4-Cl-C_6H_4	$-CH_2CH_2CH_2-$
378	CH_3	4-F-C_6H_4	$-CH_2CH_2CH_2-$
379	C_2H_5	CH_3	$-CH_2-$
380	C_2H_5	C_2H_5	$-CH_2-$
381	C_2H_5	$CH_2CH_2CH_3$	$-CH_2-$
382	C_2H_5	$CH(CH_3)_2$	$-CH_2-$
383	C_2H_5	$CH_2CH_2CH_2CH_3$	$-CH_2-$
384	C_2H_5	i-C_4H_9	$-CH_2-$
385	C_2H_5	s-C_4H_9	$-CH_2-$
386	C_2H_5	$C(CH_3)_3$	$-CH_2-$
387	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
388	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
389	C_2H_5	cyclopentyl	$-CH_2-$
390	C_2H_5	cyclohexyl	$-CH_2-$
391	C_2H_5	allyl	$-CH_2-$
392	C_2H_5	but-2-en-1-yl	$-CH_2-$
393	C_2H_5	4-chlorobut-2-en-1-yl	$-CH_2-$
394	C_2H_5	propargyl	$-CH_2-$
395	C_2H_5	C_6H_5	$-CH_2-$
396	C_2H_5	$C_6H_5CH_2$	$-CH_2-$
397	C_2H_5	2-phenyleth-1-yl	$-CH_2-$
398	C_2H_5	4-Cl-C_6H_4	$-CH_2-$
399	C_2H_5	4-F-C_6H_4	$-CH_2-$
400	C_2H_5	CH_3	$-CH(CH_3)-$
401	C_2H_5	C_2H_5	$-CH(CH_3)-$
402	C_2H_5	$CH_2CH_2CH_3$	$-CH(CH_3)-$
403	C_2H_5	$CH(CH_3)_2$	$-CH(CH_3)-$
404	C_2H_5	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
405	C_2H_5	i-C_4H_9	$-CH(CH_3)-$
406	C_2H_5	s-C_4H_9	$-CH(CH_3)-$
407	C_2H_5	$C(CH_3)_3$	$-CH(CH_3)-$
408	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
409	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
410	C_2H_5	cyclopentyl	-CH(CH_3)-
411	C_2H_5	cyclohexyl	-CH(CH_3)-
412	C_2H_5	allyl	-CH(CH_3)-
413	C_2H_5	but-2-en-1-yl	-CH(CH_3)-
414	C_2H_5	4-chlorobut-2-en-1-yl	-CH(CH_3)-
415	C_2H_5	propargyl	-CH(CH_3)-
416	C_2H_5	C_6H_5	-CH(CH_3)-
417	C_2H_5	$C_6H_5CH_2$	-CH(CH_3)-
418	C_2H_5	2-phenyleth-1-yl	-CH(CH_3)-
419	C_2H_5	4-Cl-C_6H_4	-CH(CH_3)-
420	C_2H_5	4-F-C_6H_4	-CH(CH_3)-
421	C_2H_5	CH_3	-CH(C_2H_5)-
422	C_2H_5	C_2H_5	-CH(C_2H_5)-
423	C_2H_5	$CH_2CH_2CH_3$	-CH(C_2H_5)-
424	C_2H_5	$CH(CH_3)_2$	-CH(C_2H_5)-
425	C_2H_5	$CH_2CH_2CH_2CH_3$	-CH(C_2H_5)-
426	C_2H_5	i-C_4H_9	-CH(C_2H_5)-
427	C_2H_5	s-C_4H_9	-CH(C_2H_5)-
428	C_2H_5	$C(CH_3)_3$	-CH(C_2H_5)-
429	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	-CH(C_2H_5)-
430	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-CH(C_2H_5)-
431	C_2H_5	cyclopentyl	-CH(C_2H_5)-
432	C_2H_5	cyclohexyl	-CH(C_2H_5)-
433	C_2H_5	allyl	-CH(C_2H_5)-
434	C_2H_5	but-2-en-1-yl	-CH(C_2H_5)-
435	C_2H_5	4-chlorobut-2-en-1-yl	-CH(C_2H_5)-
436	C_2H_5	propargyl	-CH(C_2H_5)-
437	C_2H_5	C_6H_5	-CH(C_2H_5)-
438	C_2H_5	$C_6H_5CH_2$	-CH(C_2H_5)-
439	C_2H_5	2-phenyleth-1-yl	-CH(C_2H_5)-
440	C_2H_5	4-Cl-C_6H_4	-CH(C_2H_5)-
441	C_2H_5	4-F-C_6H_4	-CH(C_2H_5)-
442	C_2H_5	CH_3	-C(CH_3)$_2$-
443	C_2H_5	C_2H_5	-C(CH_3)$_2$-
444	C_2H_5	$CH_2CH_2CH_3$	-C(CH_3)$_2$-
445	C_2H_5	$CH(CH_3)_2$	-C(CH_3)$_2$-
446	C_2H_5	$CH_2CH_2CH_2CH_3$	-C(CH_3)$_2$-
447	C_2H_5	i-C_4H_9	-C(CH_3)$_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
448	C_2H_5	s-C_4H_9	-$C(CH_3)_2$-
449	C_2H_5	$C(CH_3)_3$	-$C(CH_3)_2$-
450	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	-$C(CH_3)_2$-
451	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$C(CH_3)_2$-
452	C_2H_5	cyclopentyl	-$C(CH_3)_2$-
453	C_2H_5	cyclohexyl	-$C(CH_3)_2$-
454	C_2H_5	allyl	-$C(CH_3)_2$-
455	C_2H_5	but-2-en-1-yl	-$C(CH_3)_2$-
456	C_2H_5	4-chlorobut-2-en-1-yl	-$C(CH_3)_2$-
457	C_2H_5	propargyl	-$C(CH_3)_2$-
458	C_2H_5	C_6H_5	-$C(CH_3)_2$-
459	C_2H_5	$C_6H_5CH_2$	-$C(CH_3)_2$-
460	C_2H_5	2-phenyleth-1-yl	-$C(CH_3)_2$-
461	C_2H_5	4-Cl-C_6H_4	-$C(CH_3)_2$-
462	C_2H_5	4-F-C_6H_4	-$C(CH_3)_2$-
463	C_2H_5	CH_3	-CH_2CH_2-
464	C_2H_5	C_2H_5	-CH_2CH_2-
465	C_2H_5	$CH_2CH_2CH_3$	-CH_2CH_2-
466	C_2H_5	$CH(CH_3)_2$	-CH_2CH_2-
467	C_2H_5	$CH_2CH_2CH_2CH_3$	-CH_2CH_2-
468	C_2H_5	i-C_4H_9	-CH_2CH_2-
469	C_2H_5	s-C_4H_9	-CH_2CH_2-
470	C_2H_5	$C(CH_3)_3$	-CH_2CH_2-
471	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
472	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
473	C_2H_5	cyclopentyl	-CH_2CH_2-
474	C_2H_5	cyclohexyl	-CH_2CH_2-
475	C_2H_5	allyl	-CH_2CH_2-
476	C_2H_5	but-2-en-1-yl	-CH_2CH_2-
477	C_2H_5	4-chlorobut-2-en-1-yl	-CH_2CH_2-
478	C_2H_5	propargyl	-CH_2CH_2-
479	C_2H_5	C_6H_5	-CH_2CH_2-
480	C_2H_5	$C_6H_5CH_2$	-CH_2CH_2-
481	C_2H_5	2-phenyleth-1-yl	-CH_2CH_2-
482	C_2H_5	4-Cl-C_6H_4	-CH_2CH_2-
483	C_2H_5	4-F-C_6H_4	-CH_2CH_2-
484	C_2H_5	CH_3	-$CH(CH_3)CH_2$-
485	C_2H_5	C_2H_5	-$CH(CH_3)CH_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
486	C_2H_5	$CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
487	C_2H_5	$CH(CH_3)_2$	$-CH(CH_3)CH_2-$
488	C_2H_5	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
489	C_2H_5	i-C_4H_9	$-CH(CH_3)CH_2-$
490	C_2H_5	s-C_4H_9	$-CH(CH_3)CH_2-$
491	C_2H_5	$C(CH_3)_3$	$-CH(CH_3)CH_2-$
492	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
493	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)CH_2-$
494	C_2H_5	cyclopentyl	$-CH(CH_3)CH_2-$
495	C_2H_5	cyclohexyl	$-CH(CH_3)CH_2-$
496	C_2H_5	allyl	$-CH(CH_3)CH_2-$
497	C_2H_5	but-2-en-1-yl	$-CH(CH_3)CH_2-$
498	C_2H_5	4-chlorobut-2-en-1-yl	$-CH(CH_3)CH_2-$
499	C_2H_5	propargyl	$-CH(CH_3)CH_2-$
500	C_2H_5	C_6H_5	$-CH(CH_3)CH_2-$
501	C_2H_5	$C_6H_5CH_2$	$-CH(CH_3)CH_2-$
502	C_2H_5	2-phenyleth-1-yl	$-CH(CH_3)CH_2-$
503	C_2H_5	4-Cl-C_6H_4	$-CH(CH_3)CH_2-$
504	C_2H_5	4-F-C_6H_4	$-CH(CH_3)CH_2-$
505	C_2H_5	CH_3	$-CH_2CH(CH_3)-$
506	C_2H_5	C_2H_5	$-CH_2CH(CH_3)-$
507	C_2H_5	$CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
508	C_2H_5	$CH(CH_3)_2$	$-CH_2CH(CH_3)-$
509	C_2H_5	$CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
510	C_2H_5	i-C_4H_9	$-CH_2CH(CH_3)-$
511	C_2H_5	s-C_4H_9	$-CH_2CH(CH_3)-$
512	C_2H_5	$C(CH_3)_3$	$-CH_2CH(CH_3)-$
513	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
514	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH(CH_3)-$
515	C_2H_5	cyclopentyl	$-CH_2CH(CH_3)-$
516	C_2H_5	cyclohexyl	$-CH_2CH(CH_3)-$
517	C_2H_5	allyl	$-CH_2CH(CH_3)-$
518	C_2H_5	but-2-en-1-yl	$-CH_2CH(CH_3)-$
519	C_2H_5	4-chlorobut-2-en-1-yl	$-CH_2CH(CH_3)-$
520	C_2H_5	propargyl	$-CH_2CH(CH_3)-$
521	C_2H_5	C_6H_5	$-CH_2CH(CH_3)-$
522	C_2H_5	$C_6H_5CH_2$	$-CH_2CH(CH_3)-$
523	C_2H_5	2-phenyleth-1-yl	$-CH_2CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
524	C_2H_5	4-Cl-C_6H_4	-$CH_2CH(CH_3)$-
525	C_2H_5	4-F-C_6H_4	-$CH_2CH(CH_3)$-
526	C_2H_5	CH_3	-$CH(CH_3)CH(CH_3)$-
527	C_2H_5	C_2H_5	-$CH(CH_3)CH(CH_3)$-
528	C_2H_5	$CH_2CH_2CH_3$	-$CH(CH_3)CH(CH_3)$-
529	C_2H_5	$CH(CH_3)_2$	-$CH(CH_3)CH(CH_3)$-
530	C_2H_5	$CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH(CH_3)$-
531	C_2H_5	i-C_4H_9	-$CH(CH_3)CH(CH_3)$-
532	C_2H_5	s-C_4H_9	-$CH(CH_3)CH(CH_3)$-
533	C_2H_5	$C(CH_3)_3$	-$CH(CH_3)CH(CH_3)$-
534	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH(CH_3)$-
535	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH(CH_3)CH(CH_3)$-
536	C_2H_5	cyclopentyl	-$CH(CH_3)CH(CH_3)$-
537	C_2H_5	cyclohexyl	-$CH(CH_3)CH(CH_3)$-
538	C_2H_5	allyl	-$CH(CH_3)CH(CH_3)$-
539	C_2H_5	but-2-en-1-yl	-$CH(CH_3)CH(CH_3)$-
540	C_2H_5	4-chlorobut-2-en-1-yl	-$CH(CH_3)CH(CH_3)$-
541	C_2H_5	propargyl	-$CH(CH_3)CH(CH_3)$-
542	C_2H_5	C_6H_5	-$CH(CH_3)CH(CH_3)$-
543	C_2H_5	$C_6H_5CH_2$	-$CH(CH_3)CH(CH_3)$-
544	C_2H_5	2-phenyleth-1-yl	-$CH(CH_3)CH(CH_3)$-
545	C_2H_5	4-Cl-C_6H_4	-$CH(CH_3)CH(CH_3)$-
546	C_2H_5	4-F-C_6H_4	-$CH(CH_3)CH(CH_3)$-
547	C_2H_5	CH_3	-$CH_2CH_2CH_2$-
548	C_2H_5	C_2H_5	-$CH_2CH_2CH_2$-
549	C_2H_5	$CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
550	C_2H_5	$CH(CH_3)_2$	-$CH_2CH_2CH_2$-
551	C_2H_5	$CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
552	C_2H_5	i-C_4H_9	-$CH_2CH_2CH_2$-
553	C_2H_5	s-C_4H_9	-$CH_2CH_2CH_2$-
554	C_2H_5	$C(CH_3)_3$	-$CH_2CH_2CH_2$-
555	C_2H_5	$CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
556	C_2H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
557	C_2H_5	cyclopentyl	-$CH_2CH_2CH_2$-
558	C_2H_5	cyclohexyl	-$CH_2CH_2CH_2$-
559	C_2H_5	allyl	-$CH_2CH_2CH_2$-
560	C_2H_5	but-2-en-1-yl	-$CH_2CH_2CH_2$-
561	C_2H_5	4-chlorobut-2-en-1-yl	-$CH_2CH_2CH_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
562	C_2H_5	propargyl	$-CH_2CH_2CH_2-$
563	C_2H_5	C_6H_5	$-CH_2CH_2CH_2-$
564	C_2H_5	$C_6H_5CH_2$	$-CH_2CH_2CH_2-$
565	C_2H_5	2-phenyleth-1-yl	$-CH_2CH_2CH_2-$
566	C_2H_5	4-Cl-C_6H_4	$-CH_2CH_2CH_2-$
567	C_2H_5	4-F-C_6H_4	$-CH_2CH_2CH_2-$
568	$CH_2CH_2CH_3$	CH_3	$-CH_2-$
569	$CH_2CH_2CH_3$	C_2H_5	$-CH_2-$
570	$CH_2CH_2CH_3$	$CH_2CH_2CH_3$	$-CH_2-$
571	$CH_2CH_2CH_3$	$CH(CH_3)_2$	$-CH_2-$
572	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_3$	$-CH_2-$
573	$CH_2CH_2CH_3$	i-C_4H_9	$-CH_2-$
574	$CH_2CH_2CH_3$	s-C_4H_9	$-CH_2-$
575	$CH_2CH_2CH_3$	$C(CH_3)_3$	$-CH_2-$
576	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
577	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
578	$CH_2CH_2CH_3$	cyclopentyl	$-CH_2-$
579	$CH_2CH_2CH_3$	cyclohexyl	$-CH_2-$
580	$CH_2CH_2CH_3$	allyl	$-CH_2-$
581	$CH_2CH_2CH_3$	but-2-en-1-yl	$-CH_2-$
582	$CH_2CH_2CH_3$	4-chlorobut-2-en-1-yl	$-CH_2-$
583	$CH_2CH_2CH_3$	propargyl	$-CH_2-$
584	$CH_2CH_2CH_3$	C_6H_5	$-CH_2-$
585	$CH_2CH_2CH_3$	$C_6H_5CH_2$	$-CH_2-$
586	$CH_2CH_2CH_3$	2-phenyleth-1-yl	$-CH_2-$
587	$CH_2CH_2CH_3$	4-Cl-C_6H_4	$-CH_2-$
588	$CH_2CH_2CH_3$	4-F-C_6H_4	$-CH_2-$
589	$CH_2CH_2CH_3$	CH_3	$-CH(CH_3)-$
590	$CH_2CH_2CH_3$	C_2H_5	$-CH(CH_3)-$
591	$CH_2CH_2CH_3$	$CH_2CH_2CH_3$	$-CH(CH_3)-$
592	$CH_2CH_2CH_3$	$CH(CH_3)_2$	$-CH(CH_3)-$
593	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
594	$CH_2CH_2CH_3$	i-C_4H_9	$-CH(CH_3)-$
595	$CH_2CH_2CH_3$	s-C_4H_9	$-CH(CH_3)-$
596	$CH_2CH_2CH_3$	$C(CH_3)_3$	$-CH(CH_3)-$
597	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
598	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
599	$CH_2CH_2CH_3$	cyclopentyl	$-CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
600	$CH_2CH_2CH_3$	cyclohexyl	-$CH(CH_3)$-
601	$CH_2CH_2CH_3$	allyl	-$CH(CH_3)$-
602	$CH_2CH_2CH_3$	but-2-en-1-yl	-$CH(CH_3)$-
603	$CH_2CH_2CH_3$	4-chlorobut-2-en-1-yl	-$CH(CH_3)$-
604	$CH_2CH_2CH_3$	propargyl	-$CH(CH_3)$-
605	$CH_2CH_2CH_3$	C_6H_5	-$CH(CH_3)$-
606	$CH_2CH_2CH_3$	$C_6H_5CH_2$	-$CH(CH_3)$-
607	$CH_2CH_2CH_3$	2-phenyleth-1-yl	-$CH(CH_3)$-
608	$CH_2CH_2CH_3$	4-Cl-C_6H_4	-$CH(CH_3)$-
609	$CH_2CH_2CH_3$	4-F-C_6H_4	-$CH(CH_3)$-
610	$CH_2CH_2CH_3$	CH_3	-CH_2CH_2-
611	$CH_2CH_2CH_3$	C_2H_5	-CH_2CH_2-
612	$CH_2CH_2CH_3$	$CH_2CH_2CH_3$	-CH_2CH_2-
613	$CH_2CH_2CH_3$	$CH(CH_3)_2$	-CH_2CH_2-
614	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_3$	-CH_2CH_2-
615	$CH_2CH_2CH_3$	i-C_4H_9	-CH_2CH_2-
616	$CH_2CH_2CH_3$	s-C_4H_9	-CH_2CH_2-
617	$CH_2CH_2CH_3$	$C(CH_3)_3$	-CH_2CH_2-
618	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
619	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_2CH_3$	-CH_2CH_2-
620	$CH_2CH_2CH_3$	cyclopentyl	-CH_2CH_2-
621	$CH_2CH_2CH_3$	cyclohexyl	-CH_2CH_2-
622	$CH_2CH_2CH_3$	allyl	-CH_2CH_2-
623	$CH_2CH_2CH_3$	but-2-en-1-yl	-CH_2CH_2-
624	$CH_2CH_2CH_3$	4-chlorobut-2-en-1-yl	-CH_2CH_2-
625	$CH_2CH_2CH_3$	propargyl	-CH_2CH_2-
626	$CH_2CH_2CH_3$	C_6H_5	-CH_2CH_2-
627	$CH_2CH_2CH_3$	$C_6H_5CH_2$	-CH_2CH_2-
628	$CH_2CH_2CH_3$	2-phenyleth-1-yl	-CH_2CH_2-
629	$CH_2CH_2CH_3$	4-Cl-C_6H_4	-CH_2CH_2-
630	$CH_2CH_2CH_3$	4-F-C_6H_4	-CH_2CH_2-
631	$CH_2CH_2CH_3$	CH_3	-$CH_2CH_2CH_2$-
632	$CH_2CH_2CH_3$	C_2H_5	-$CH_2CH_2CH_2$-
633	$CH_2CH_2CH_3$	$CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
634	$CH_2CH_2CH_3$	$CH(CH_3)_2$	-$CH_2CH_2CH_2$-
635	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
636	$CH_2CH_2CH_3$	i-C_4H_9	-$CH_2CH_2CH_2$-
637	$CH_2CH_2CH_3$	s-C_4H_9	-$CH_2CH_2CH_2$-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
638	$CH_2CH_2CH_3$	$C(CH_3)_3$	$-CH_2CH_2CH_2-$
639	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
640	$CH_2CH_2CH_3$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
641	$CH_2CH_2CH_3$	cyclopentyl	$-CH_2CH_2CH_2-$
642	$CH_2CH_2CH_3$	cyclohexyl	$-CH_2CH_2CH_2-$
643	$CH_2CH_2CH_3$	allyl	$-CH_2CH_2CH_2-$
644	$CH_2CH_2CH_3$	but-2-en-1-yl	$-CH_2CH_2CH_2-$
645	$CH_2CH_2CH_3$	4-chlorobut-2-en-1-yl	$-CH_2CH_2CH_2-$
646	$CH_2CH_2CH_3$	propargyl	$-CH_2CH_2CH_2-$
647	$CH_2CH_2CH_3$	C_6H_5	$-CH_2CH_2CH_2-$
648	$CH_2CH_2CH_3$	$C_6H_5CH_2$	$-CH_2CH_2CH_2-$
649	$CH_2CH_2CH_3$	2-phenyleth-1-yl	$-CH_2CH_2CH_2-$
650	$CH_2CH_2CH_3$	4-Cl-C_6H_4	$-CH_2CH_2CH_2-$
651	$CH_2CH_2CH_3$	4-F-C_6H_4	$-CH_2CH_2CH_2-$
652	$CH(CH_3)_2$	CH_3	$-CH_2-$
653	$CH(CH_3)_2$	C_2H_5	$-CH_2-$
654	$CH(CH_3)_2$	$CH_2CH_2CH_3$	$-CH_2-$
655	$CH(CH_3)_2$	$CH(CH_3)_2$	$-CH_2-$
656	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_3$	$-CH_2-$
657	$CH(CH_3)_2$	i-C_4H_9	$-CH_2-$
658	$CH(CH_3)_2$	s-C_4H_9	$-CH_2-$
659	$CH(CH_3)_2$	$C(CH_3)_3$	$-CH_2-$
660	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
661	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2-$
662	$CH(CH_3)_2$	cyclopentyl	$-CH_2-$
663	$CH(CH_3)_2$	cyclohexyl	$-CH_2-$
664	$CH(CH_3)_2$	allyl	$-CH_2-$
665	$CH(CH_3)_2$	but-2-en-1-yl	$-CH_2-$
666	$CH(CH_3)_2$	4-chlorobut-2-en-1-yl	$-CH_2-$
667	$CH(CH_3)_2$	propargyl	$-CH_2-$
668	$CH(CH_3)_2$	C_6H_5	$-CH_2-$
669	$CH(CH_3)_2$	$C_6H_5CH_2$	$-CH_2-$
670	$CH(CH_3)_2$	2-phenyleth-1-yl	$-CH_2-$
671	$CH(CH_3)_2$	4-Cl-C_6H_4	$-CH_2-$
672	$CH(CH_3)_2$	4-F-C_6H_4	$-CH_2-$
673	$CH(CH_3)_2$	CH_3	$-CH(CH_3)-$
674	$CH(CH_3)_2$	C_2H_5	$-CH(CH_3)-$
675	$CH(CH_3)_2$	$CH_2CH_2CH_3$	$-CH(CH_3)-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
676	$CH(CH_3)_2$	$CH(CH_3)_2$	$-CH(CH_3)-$
677	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
678	$CH(CH_3)_2$	i-C_4H_9	$-CH(CH_3)-$
679	$CH(CH_3)_2$	s-C_4H_9	$-CH(CH_3)-$
680	$CH(CH_3)_2$	$C(CH_3)_3$	$-CH(CH_3)-$
681	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
682	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
683	$CH(CH_3)_2$	cyclopentyl	$-CH(CH_3)-$
684	$CH(CH_3)_2$	cyclohexyl	$-CH(CH_3)-$
685	$CH(CH_3)_2$	allyl	$-CH(CH_3)-$
686	$CH(CH_3)_2$	but-2-en-1-yl	$-CH(CH_3)-$
687	$CH(CH_3)_2$	4-chlorobut-2-en-1-yl	$-CH(CH_3)-$
688	$CH(CH_3)_2$	propargyl	$-CH(CH_3)-$
689	$CH(CH_3)_2$	C_6H_5	$-CH(CH_3)-$
690	$CH(CH_3)_2$	$C_6H_5CH_2$	$-CH(CH_3)-$
691	$CH(CH_3)_2$	2-phenyleth-1-yl	$-CH(CH_3)-$
692	$CH(CH_3)_2$	4-Cl-C_6H_4	$-CH(CH_3)-$
693	$CH(CH_3)_2$	4-F-C_6H_4	$-CH(CH_3)-$
694	$CH(CH_3)_2$	CH_3	$-CH_2CH_2-$
695	$CH(CH_3)_2$	C_2H_5	$-CH_2CH_2-$
696	$CH(CH_3)_2$	$CH_2CH_2CH_3$	$-CH_2CH_2-$
697	$CH(CH_3)_2$	$CH(CH_3)_2$	$-CH_2CH_2-$
698	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
699	$CH(CH_3)_2$	i-C_4H_9	$-CH_2CH_2-$
700	$CH(CH_3)_2$	s-C_4H_9	$-CH_2CH_2-$
701	$CH(CH_3)_2$	$C(CH_3)_3$	$-CH_2CH_2-$
702	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
703	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
704	$CH(CH_3)_2$	cyclopentyl	$-CH_2CH_2-$
705	$CH(CH_3)_2$	cyclohexyl	$-CH_2CH_2-$
706	$CH(CH_3)_2$	allyl	$-CH_2CH_2-$
707	$CH(CH_3)_2$	but-2-en-1-yl	$-CH_2CH_2-$
708	$CH(CH_3)_2$	4-chlorobut-2-en-1-yl	$-CH_2CH_2-$
709	$CH(CH_3)_2$	propargyl	$-CH_2CH_2-$
710	$CH(CH_3)_2$	C_6H_5	$-CH_2CH_2-$
711	$CH(CH_3)_2$	$C_6H_5CH_2$	$-CH_2CH_2-$
712	$CH(CH_3)_2$	2-phenyleth-1-yl	$-CH_2CH_2-$
713	$CH(CH_3)_2$	4-Cl-C_6H_4	$-CH_2CH_2-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
714	$CH(CH_3)_2$	4-F-C_6H_4	-CH_2CH_2-
715	$CH(CH_3)_2$	CH_3	-$CH_2CH_2CH_2$-
716	$CH(CH_3)_2$	C_2H_5	-$CH_2CH_2CH_2$-
717	$CH(CH_3)_2$	$CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
718	$CH(CH_3)_2$	$CH(CH_3)_2$	-$CH_2CH_2CH_2$-
719	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
720	$CH(CH_3)_2$	i-C_4H_9	-$CH_2CH_2CH_2$-
721	$CH(CH_3)_2$	s-C_4H_9	-$CH_2CH_2CH_2$-
722	$CH(CH_3)_2$	$C(CH_3)_3$	-$CH_2CH_2CH_2$-
723	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
724	$CH(CH_3)_2$	$CH_2CH_2CH_2CH_2CH_2CH_3$	-$CH_2CH_2CH_2$-
725	$CH(CH_3)_2$	cyclopentyl	-$CH_2CH_2CH_2$-
726	$CH(CH_3)_2$	cyclohexyl	-$CH_2CH_2CH_2$-
727	$CH(CH_3)_2$	allyl	-$CH_2CH_2CH_2$-
728	$CH(CH_3)_2$	but-2-en-1-yl	-$CH_2CH_2CH_2$-
729	$CH(CH_3)_2$	4-chlorobut-2-en-1-yl	-$CH_2CH_2CH_2$-
730	$CH(CH_3)_2$	propargyl	-$CH_2CH_2CH_2$-
731	$CH(CH_3)_2$	C_6H_5	-$CH_2CH_2CH_2$-
732	$CH(CH_3)_2$	$C_6H_5CH_2$	-$CH_2CH_2CH_2$-
733	$CH(CH_3)_2$	2-phenyleth-1-yl	-$CH_2CH_2CH_2$-
734	$CH(CH_3)_2$	4-Cl-C_6H_4	-$CH_2CH_2CH_2$-
735	$CH(CH_3)_2$	4-F-C_6H_4	-$CH_2CH_2CH_2$-
736	C_6H_5	CH_3	-CH_2-
737	C_6H_5	C_2H_5	-CH_2-
738	C_6H_5	$CH_2CH_2CH_3$	-CH_2-
739	C_6H_5	$CH(CH_3)_2$	-CH_2-
740	C_6H_5	$CH_2CH_2CH_2CH_3$	-CH_2-
741	C_6H_5	i-C_4H_9	-CH_2-
742	C_6H_5	s-C_4H_9	-CH_2-
743	C_6H_5	$C(CH_3)_3$	-CH_2-
744	C_6H_5	$CH_2CH_2CH_2CH_2CH_3$	-CH_2-
745	C_6H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	-CH_2-
746	C_6H_5	cyclopentyl	-CH_2-
747	C_6H_5	cyclohexyl	-CH_2-
748	C_6H_5	allyl	-CH_2-
749	C_6H_5	but-2-en-1-yl	-CH_2-
750	C_6H_5	4-chlorobut-2-en-1-yl	-CH_2-
751	C_6H_5	propargyl	-CH_2-

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
752	C_6H_5	C_6H_5	$-CH_2-$
753	C_6H_5	$C_6H_5CH_2$	$-CH_2-$
754	C_6H_5	2-phenyleth-1-yl	$-CH_2-$
755	C_6H_5	4-Cl-C_6H_4	$-CH_2-$
756	C_6H_5	4-F-C_6H_4	$-CH_2-$
757	C_6H_5	CH_3	$-CH(CH_3)-$
758	C_6H_5	C_2H_5	$-CH(CH_3)-$
759	C_6H_5	$CH_2CH_2CH_3$	$-CH(CH_3)-$
760	C_6H_5	$CH(CH_3)_2$	$-CH(CH_3)-$
761	C_6H_5	$CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
762	C_6H_5	i-C_4H_9	$-CH(CH_3)-$
763	C_6H_5	s-C_4H_9	$-CH(CH_3)-$
764	C_6H_5	$C(CH_3)_3$	$-CH(CH_3)-$
765	C_6H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
766	C_6H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH(CH_3)-$
767	C_6H_5	cyclopentyl	$-CH(CH_3)-$
768	C_6H_5	cyclohexyl	$-CH(CH_3)-$
769	C_6H_5	allyl	$-CH(CH_3)-$
770	C_6H_5	but-2-en-1-yl	$-CH(CH_3)-$
771	C_6H_5	4-chlorobut-2-en-1-yl	$-CH(CH_3)-$
772	C_6H_5	propargyl	$-CH(CH_3)-$
773	C_6H_5	C_6H_5	$-CH(CH_3)-$
774	C_6H_5	$C_6H_5CH_2$	$-CH(CH_3)-$
775	C_6H_5	2-phenyleth-1-yl	$-CH(CH_3)-$
776	C_6H_5	4-Cl-C_6H_4	$-CH(CH_3)-$
777	C_6H_5	4-F-C_6H_4	$-CH(CH_3)-$
778	C_6H_5	CH_3	$-CH_2CH_2-$
779	C_6H_5	C_2H_5	$-CH_2CH_2-$
780	C_6H_5	$CH_2CH_2CH_3$	$-CH_2CH_2-$
781	C_6H_5	$CH(CH_3)_2$	$-CH_2CH_2-$
782	C_6H_5	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
783	C_6H_5	i-C_4H_9	$-CH_2CH_2-$
784	C_6H_5	s-C_4H_9	$-CH_2CH_2-$
785	C_6H_5	$C(CH_3)_3$	$-CH_2CH_2-$
786	C_6H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
787	C_6H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2-$
788	C_6H_5	cyclopentyl	$-CH_2CH_2-$
789	C_6H_5	cyclohexyl	$-CH_2CH_2-$

No.	R^5	R^6	$(C(R^{3m})(R^{4m}))_m$
790	C_6H_5	allyl	$-CH_2CH_2-$
791	C_6H_5	but-2-en-1-yl	$-CH_2CH_2-$
792	C_6H_5	4-chlorobut-2-en-1-yl	$-CH_2CH_2-$
793	C_6H_5	propargyl	$-CH_2CH_2-$
794	C_6H_5	C_6H_5	$-CH_2CH_2-$
795	C_6H_5	$C_6H_5CH_2$	$-CH_2CH_2-$
796	C_6H_5	2-phenyleth-1-yl	$-CH_2CH_2-$
797	C_6H_5	4-Cl-C_6H_4	$-CH_2CH_2-$
798	C_6H_5	4-F-C_6H_4	$-CH_2CH_2-$
799	C_6H_5	CH_3	$-CH_2CH_2CH_2-$
800	C_6H_5	C_2H_5	$-CH_2CH_2CH_2-$
801	C_6H_5	$CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
802	C_6H_5	$CH(CH_3)_2$	$-CH_2CH_2CH_2-$
803	C_6H_5	$CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
804	C_6H_5	i-C_4H_9	$-CH_2CH_2CH_2-$
805	C_6H_5	s-C_4H_9	$-CH_2CH_2CH_2-$
806	C_6H_5	$C(CH_3)_3$	$-CH_2CH_2CH_2-$
807	C_6H_5	$CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
808	C_6H_5	$CH_2CH_2CH_2CH_2CH_2CH_3$	$-CH_2CH_2CH_2-$
809	C_6H_5	cyclopentyl	$-CH_2CH_2CH_2-$
810	C_6H_5	cyclohexyl	$-CH_2CH_2CH_2-$
811	C_6H_5	allyl	$-CH_2CH_2CH_2-$
812	C_6H_5	but-2-en-1-yl	$-CH_2CH_2CH_2-$
813	C_6H_5	4-chlorobut-2-en-1-yl	$-CH_2CH_2CH_2-$
814	C_6H_5	propargyl	$-CH_2CH_2CH_2-$
815	C_6H_5	C_6H_5	$-CH_2CH_2CH_2-$
816	C_6H_5	$C_6H_5CH_2$	$-CH_2CH_2CH_2-$
817	C_6H_5	2-phenyleth-1-yl	$-CH_2CH_2CH_2-$
818	C_6H_5	4-Cl-C_6H_4	$-CH_2CH_2CH_2-$
819	C_6H_5	4-F-C_6H_4	$-CH_2CH_2CH_2-$

s-C_4H_9: $-CH(CH_3)(C_2H_5)$;

i-C_4H_9: $CH_2CH(CH_3)_2$;

allyl: $-CH_2CH=CH_2$;

propargyl: $-CH_2C\equiv CH$;

Table 1:

Compounds of the formula IA, in which A is 2-chlorophenyl and R^5, R^6 and

$(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 2:

Compounds of the formula IA, in which A is 2-trifluoromethylphenyl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 3:

Compounds of the formula IA, in which A is 2-difluoromethylphenyl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 4:

Compounds of the formula IA, in which A is 2-methylphenyl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 5:

Compounds of the formula IA, in which A is 2-chloropyridin-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 6:

Compounds of the formula IA, in which A is 2-trifluoromethylpyridin-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 7:

Compounds of the formula IA, in which A is 2-difluoromethylpyridin-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 8:

Compounds of the formula IA, in which A is 2-methylpyridin-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 9:

Compounds of the formula IA, in which A is 4-methylpyridimidin-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 10:

Compounds of the formula IA, in which A is 4-trifluoromethylpyrimidin-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 11:

Compounds of the formula IA, in which A is 4-difluoromethylpyrimidin-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 12:

Compounds of the formula IA, in which A is 1-methyl-3-trifluoromethylpyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 13:

Compounds of the formula IA, in which A is 1-methyl-3-difluoromethylpyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 14:

Compounds of the formula IA, in which A is 1,3-dimethylpyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 15:

Compounds of the formula IA, in which A is 1-methyl-3-trifluoromethyl-5-fluoropyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 16:

Compounds of the formula IA, in which A is 1-methyl-3-difluoromethyl-5-fluoropyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 17:

Compounds of the formula IA, in which A is 1-methyl-3-trifluoromethyl-5-chloropyrazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 18:

Compounds of the formula IA, in which A is 1-methyl-3-trifluoromethylpyrol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 19:

Compounds of the formula IA, in which A is 1-methyl-3-difluoromethylpyrol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 20:

Compounds of the formula IA, in which A is 2-methyl-4-trifluoromethylthiazol-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 21:

Compounds of the formula IA, in which A is 2-methyl-4-difluoromethylthiazol-5-yl and

R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 22:

Compounds of the formula IA, in which A is 2,4-dimethylthiazol-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 23:

Compounds of the formula IA, in which A is 2-methyl-5-trifluoromethylthiazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 24:

Compounds of the formula IA, in which A is 2-methyl-5-difluoromethylthiazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 25:

Compounds of the formula IA, in which A is 2,5-dimethylthiazol-4-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 26:

Compounds of the formula IA, in which A is 2-methyl-4-trifluoromethyloxazol-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 27:

Compounds of the formula IA, in which A is 2-methyl-4-difluoromethyloxazol-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 28:

Compounds of the formula IA, in which A is 2,4-dimethyloxazol-5-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 29:

Compounds of the formula IA, in which A is 2-trifluoromethylthiophen-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 30:

Compounds of the formula IA, in which A is 5-methyl-2-trifluoromethylthiophen-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 31:

Compounds of the formula IA, in which A is 2-methylthiophen-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 32:

Compounds of the formula IA, in which A is 2,5-dimethylthiophen-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 33:

Compounds of the formula IA, in which A is 3-trifluoromethylthiophen-2-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 34:

Compounds of the formula IA, in which A is 3-methylthiophen-2-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 35:

Compounds of the formula IA, in which A is 3,5-dimethylthiophen-2-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 36:

Compounds of the formula IA, in which A is 5-methyl-3-trifluoromethylthiophen-2-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 37:

Compounds of the formula IA, in which A is 2-trifluoromethyfuran-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 38:

Compounds of the formula IA, in which A is 5-methyl-2-trifluoromethyfuran-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 39:

Compounds of the formula IA, in which A is 2-methylfuran-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 40:

Compounds of the formula IA, in which A is 2,5-dimethylfuran-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 41:

Compounds of the formula IA, in which A is 2-methyl-5,6-dihydro[1,4]oxathiin-3-yl and

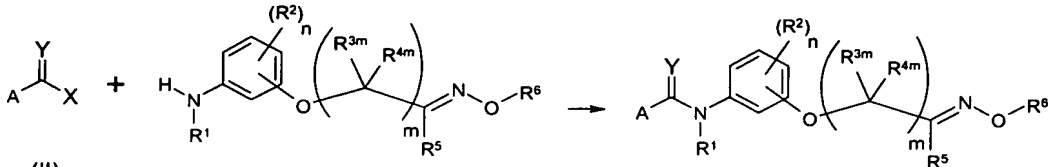
R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

Table 42:

Compounds of the formula IA, in which A is 2-methyl-5,6-dihydro-4H-thiopyran-3-yl and R^5, R^6 and $(C(R^{3m})(R^{4m}))_m$ for each individual compound correspond in each case to one row of table A.

The compounds of the formula I according to the invention can be prepared analogously to processes known per se from the prior art, for example in accordance with scheme 1 by reacting activated (heterocyclyl)carboxylic acid derivatives II with an aniline III [Houben-Weyl: "Methoden der organ. Chemie" [Methods of organic chemistry], Georg-Thieme-Verlag, Stuttgart, New York, 1985, Volume E5, pp. 941-1045]. Activated carboxylic acid derivatives II are, for example, halides, activated esters, anhydrides, azides, e.g. chlorides, fluorides, bromides, para-nitrophenyl esters, pentafluorophenyl esters, N-hydroxysuccinimide esters, hydroxybenzotriazol-1-yl esters. In scheme 1, the radicals A, Y, R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m have the meanings given above, in particular the meanings mentioned as being preferred.

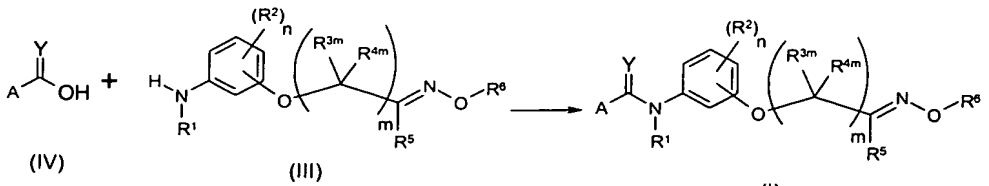
Scheme 1:



(II) (III) (I)

The active compounds I can also be prepared, for example, by reacting the acids IV with an aniline III in the presence of a coupling agent in accordance with scheme 2. In scheme 2, the radicals A, Y, R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m have the meanings mentioned above and in particular the meanings mentioned as being preferred.

Scheme 2:



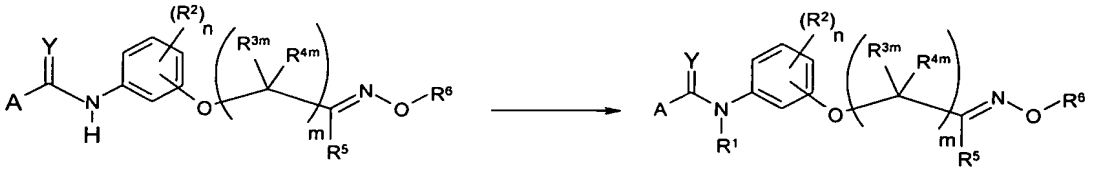
(IV) (III) (I)

Suitable coupling agents are, for example:

- coupling agents based on carbodiimide, for example N,N'-dicyclohexyl-carbodiimide [J.C. Sheehan, G.P. Hess, J. Am. Chem. Soc. 1955, 77, 1067], N-(3-dimethylaminopropyl)-N'-ethylcarbodiimide;
- coupling agents which form mixed anhydrides with carbonic esters, for example 2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline [B. Belleau, G. Malek, J. Amer. Chem. Soc. 1968, 90, 1651.], 2-isobutyloxy-1-isobutyloxycarbonyl-1,2-dihydro-quinoline [Y. Kiso, H. Yajima, J. Chem. Soc., Chem. Commun. 1972, 942.];
- phosphonium-based coupling agents, for example (benzotriazol-1-yloxy)-tris(dimethylamino)phosphonium hexafluorophosphate [B. Castro, J.R. Domoy, G. Evin, C. Selve, Tetrahedron Lett. 1975, 14, 1219.], (benzotriazol-1-yl-oxy)tripyrrolidinophosphonium hexafluorophosphate [J. Coste et.al., Tetrahedron Lett. 1990, 31, 205.];
- uronium-based coupling agents or coupling agents having a guanidinium N-oxide structure, for example N,N,N',N'-tetramethyl-O-(1H-benzotriazol-1-yl)-uronium hexafluorophosphate [R. Knorr, A. Trzeciak, W. Bannwarth, D. Gillessen, Tetrahedron Lett. 1989, 30, 1927.], N,N,N',N'-tetramethyl-O-(benzotriazol-1-yl)uronium tetrafluoroborate, (benzotriazol-1-yloxy)-dipiperidinocarbenium hexafluorophosphate [S. Chen, J. Xu, Tetrahedron Lett. 1992, 33, 647.];
- coupling agents which form acid chlorides, for example bis(2-oxo-3-oxazolidinyl)-phosphinic chloride [J. Diago-Mesequer, Synthesis 1980, 547.].

Compounds I where R^1 = unsubstituted or halogen-substituted alkyl or unsubstituted or substituted cycloalkyl can also be prepared by alkylating the amides I (where R^1 is hydrogen and which are obtainable in accordance with scheme 1 or 2) with suitable alkylating agents in the presence of bases, see scheme 3.

Scheme 3:



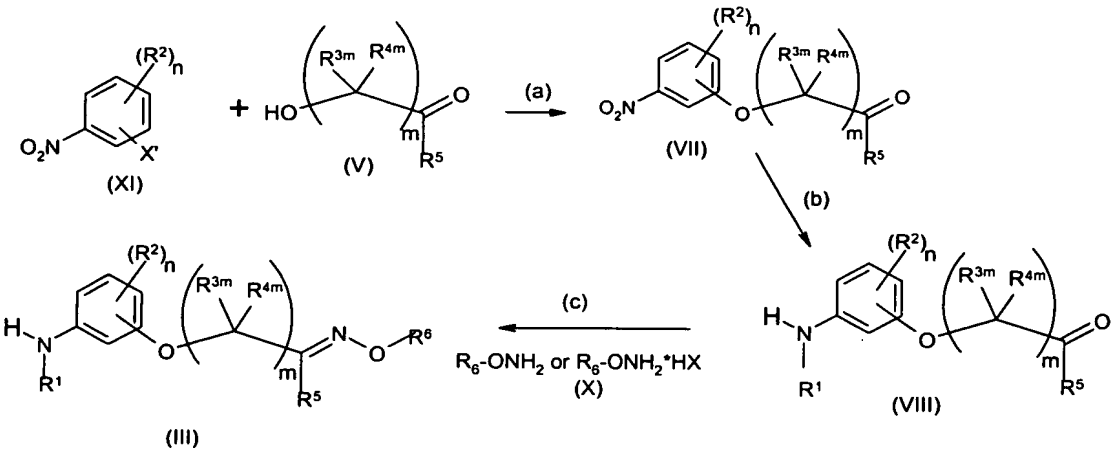
(I) {where R^1 = H} (I)

The (heterocyclyl)carboxylic acids IV can be prepared by processes known from the literature, and the (heterocyclyl)carboxylic acid derivatives II are preparable from these compounds by processes known from the literature [for example EP 0589313, EP 915868, US 4,877,441].

The anilines III can be prepared, for example, in accordance with scheme 4. In

scheme 4, the radicals R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m have the meanings given above, in particular the meanings mentioned as being preferred. The compounds V and X are known from the literature or can be prepared by processes known from the literature.

Scheme 4:



In step a in scheme 4, the nitroaromatic compounds XI in which X' is a halide, for example chloride or fluoride, is reacted with a keto alcohol V in the sense of a nucleophilic aromatic substitution, giving the nitrophenyl ether VII. The reaction is carried out analogously to known processes, for example according to Organikum, 21st edition, Wiley-VCH 2001, p. 394ff; S. Raeppel, F. Raeppel, J. Suffert; *Synlett* [SYNLES] 1998, (7), 794-796. R. Beugelmans, A. Bigot, J. Zhu; *Tetrahedron Lett* [TELEAY] 1994, *35* (31), 5649-5652. The reaction is usually carried out in the presence of a base. Suitable bases are alkali metal carbonates, alkaline earth metal carbonates, such as sodium carbonate, potassium carbonate, calcium carbonate, magnesium carbonate, alkali metal hydroxides or alkaline earth metal hydroxides, such as sodium hydroxide or potassium hydroxide. In general, the reaction is carried out in an inert organic solvent. Suitable solvents are ethers, such as diethyl ether, methyl tert-butyl ether, dioxane, tetrahydrofuran, ethylene glycol dimethyl ether, diethylene glycol.

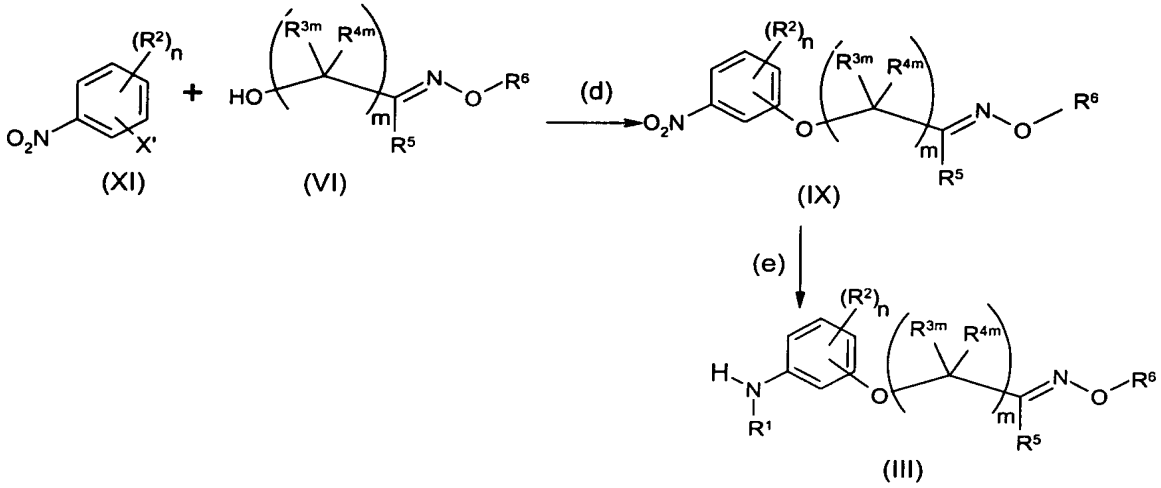
In step b, the nitrophenyl ether VII is reduced to the aminophenyl ether VIII, for example as described in Organikum, 21st edition, Wiley-VCH 2001, p. 627ff. The catalytic reduction of the nitro group of the nitrophenyl ether VII is generally carried out using hydrazine as hydrogen source, and in the presence of Raney-nickel as catalyst. The reduction is generally carried out in an inert solvent, for example in a C_1-C_4-alcohol, such as methanol or ethanol. The reduction of the nitrophenyl ether VII to the aminophenyl ether VIII can be carried out, for example, by reacting the nitrophenyl ether VII with a metal compound, such as tin(II) chloroide, under acid reaction

conditions, such as concentrated hydrochloric acid.

In step c, the aminophenyl ether VIII is reacted with a hydroxylamine X or the acid addition salt thereof, preferably the hydrochloride salt. The reaction is generally carried out in a solvent. Suitable solvents are, for example, C_1-C_4-alcohols or C_1-C_4-alcohol/water mixtures. The reaction can be carried out in the presence of a base. Suitable bases are aromatic amines, such as pyridine, or alkali metal hydroxides or alkaline earth metal hydroxides, such as sodium hydroxide, potassium hydroxide or calcium hydroxide. The oximation of the keto group in X can be carried out, for example, analogously to Organikum, 21st edition, Wiley-VCH 2001, p. 467 or D. Dhanak, C. Reese, S. Romana, G. Zappia, J. Chem. Soc. Chem. Comm. 1986 (12), 903-904, DE 3004871 or AU 580091.

Alternatively, the anilines III can also be prepared in accordance with scheme 5. In scheme 5, the radicals R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, X', n and m have the meanings given above and in particular the meanings given as being preferred.

Scheme 5:



Step d in scheme 5 is carried out analogously to step a in scheme 4. Step e in scheme 5 is carried out analogously to step b in scheme 4.

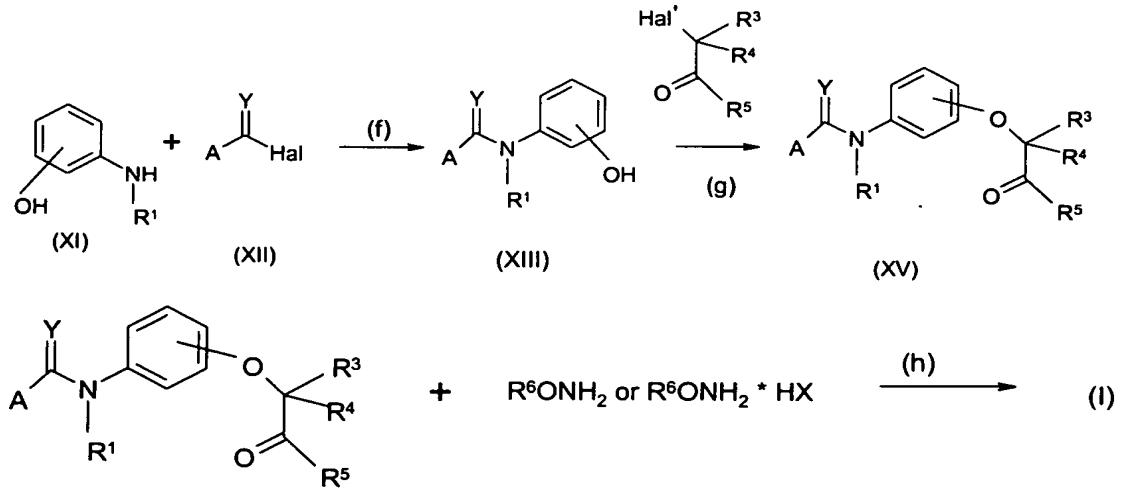
The oxime IX can also be obtained by reacting the nitrophenyl ether VII with the hydroxylamine X or the acid addition salt of X, analogously to the process described in step a of scheme 4.

The oxime VI can be obtained, for example, by reacting the keto alcohol V with the hydroxylamine X or the acid addition salt of X, analogously to the process described in

step a of scheme 4.

The compounds I according to the invention can also be prepared according to scheme 6. In scheme 6, the radicals A, Y, R^1, R^2, R^{3m}, R^{4m}, R^5, R^6, n and m have the meanings given above and in particular the meanings given as being preferred, Hal, Hal' are independently of one another halogen, for example chloride, bromide or iodide.

Scheme 6:



(XI) (XII) (XIII) (XV)

(XIV)

In step f of scheme 6, the aminophenol XI is reacted with a (heterocyclyl)carbonyl halide XII, which affords the anilide XIII. The reaction is usually carried out in the presence of a base, for example a tertiary amine, such as trimethylamine or triethylamine. In general, the reaction is carried out in an inert organic solvent. Suitable solvents are, for example, ethers, such as diethyl ether, methyl tert-butyl ether, dioxane, tetrahydrofuran, ethylene glycol dimethyl ether, diethylene glycol or chlorinated hydrocarbons, such as dichloromethane, dichloroethane or trichloromethane.

The reaction of the anilide XIII with the ketone XIV in step g of scheme 6 can be carried out in the presence of a base. Suitable bases are alkali metal carbonates, alkaline earth metal carbonates, such as sodium carbonate, potassium carbonate, calcium carbonate, magnesium carbonate, alkali metal hydroxides or alkaline earth metal hydroxides, such as sodium hydroxide or potassium hydroxide. In general, the reaction is carried out in an inert organic solvent. Suitable solvents are, for example, carboxamides, such as N,N-dimethylformamide, diethylformamide or dimethylacetamide.

The conversion of the compound XIV into the compound I in step h of scheme 6 is carried out for example analogously to step c of scheme 4.

The compounds I are suitable for use as fungicides. They are distinguished by an outstanding effectiveness against a broad spectrum of phytopathogenic fungi, especially from the classes of the *Ascomycetes*, *Deuteromycetes*, *Phycomycetes* and *Basidiomycetes*. Some are systemically effective and they can be used in plant protection as foliar and soil fungicides.

They are particularly important in the control of a multitude of fungi on various cultivated plants, such as wheat, rye, barley, oats, rice, maize, grass, bananas, cotton, soya, coffee, sugar cane, vines, fruits and ornamental plants, and vegetables, such as cucumbers, beans, tomatoes, potatoes and cucurbits, and on the seeds of these plants.

They are especially suitable for controlling the following plant diseases:

- Alternaria species on fruit and vegetables,
- Botrytis cinerea (gray mold) on strawberries, vegetables, ornamental plants and grapevines,
- Cercospora arachidicola on groundnuts,
- Erysiphe cichoracearum and Sphaerotheca fuliginea on cucurbits,
- Erysiphe graminis (powdery mildew) on cereals,
- Fusarium and Verticillium species on various plants,
- Helminthosporium species on cereals,
- Mycosphaerella species on bananas and groundnuts,
- Phytophthora infestans on potatoes and tomatoes,
- Plasmopara viticola on grapevines,
- Podosphaera leucotricha on apples,
- Pseudocercosporella herpotrichoides on wheat and barley,
- Pseudoperonospora species on hops and cucumbers,
- Puccinia species on cereals,
- Pyricularia oryzae on rice,
- Rhizoctonia species on cotton, rice and lawns,
- Septoria nodorum on wheat,
- Sphaerotheca fuliginea (mildew of cucumber) on cucumbers,
- Uncinula necator on grapevines,
- Ustilago species on cereals and sugar cane,
- Venturia species (scab) on apples and pears,
- Septoria tritici,

- Pyrenophora species,
- Leptosphaeria nodorum,
- Rhynchosporium species and
- Typhula species.

The compounds I are also suitable for controlling harmful fungi, such as *Paecilomyces variotii*, in the protection of materials (e.g. wood, paper, paint dispersions, fibers or fabrics) and in the protection of stored products.

The compounds I are employed by treating the fungi or the plants, seeds, materials or soil to be protected from fungal attack with a fungicidally effective amount of the active compounds. The application can be carried out both before and after the infection of the materials, plants or seeds by the fungi.

The fungicidal compositions generally comprise between 0.1 and 95%, preferably between 0.5 and 90%, by weight of active compound.

When employed in plant protection, the amounts applied are, depending on the kind of effect desired, between 0.01 and 2.0 kg of active compound per ha.

In seed treatment, amounts of active compound of 0.001 to 0.1 g, preferably 0.01 to 0.05 g, per kilogram of seed are generally necessary.

When used in the protection of materials or stored products, the amount of active compound applied depends on the kind of application area and on the effect desired. Amounts customarily applied in the protection of materials are, for example, 0.001 g to 2 kg, preferably 0.005 g to 1 kg, of active compound per cubic meter of treated material.

The compounds I can be converted to the usual formulations, e.g. solutions, emulsions, suspensions, dusts, powders, pastes and granules. The application form depends on the respective use intended; it should in any case guarantee a fine and uniform distribution of the compound according to the invention.

The formulations are prepared in a known way, e.g. by extending the active compound with solvents and/or carriers, if desired using emulsifiers and dispersants, it being possible, when water is the diluent, also to use other organic solvents as auxiliary solvents. Suitable auxiliaries for this purpose are essentially: solvents, such as aromatics (e.g. xylene), chlorinated aromatics (e.g. chlorobenzenes), paraffins (e.g. petroleum fractions), alcohols (e.g. methanol, butanol), ketones (e.g. cyclohexanone),

amines (e.g. ethanolamine, dimethylformamide) and water; carriers, such as ground natural minerals (e.g. kaolins, clays, talc, chalk) and ground synthetic ores (e.g. highly dispersed silicic acid, silicates); emulsifiers, such as nonionic and anionic emulsifiers (e.g. polyoxyethylene fatty alcohol ethers, alkylsulfonates and arylsulfonates) and dispersants, such as lignosulfite waste liquors and methylcellulose.

Suitable surfactants are alkali metal, alkaline earth metal and ammonium salts of lignosulfonic acid, naphthalenesulfonic acid, phenolsulfonic acid and dibutylnaphthalenesulfonic acid, alkylarylsulfonates, alkyl sulfates, alkylsulfonates, fatty alcohol sulfates and fatty acids, and alkali metal and alkaline earth metal salts thereof, salts of sulfated fatty alcohol glycol ethers, condensation products of sulfonated naphthalene and naphthalene derivatives with formaldehyde, condensation products of naphthalene or of naphthalenesulfonic acid with phenol and formaldehyde, polyoxyethylene octylphenol ethers, ethoxylated isooctylphenol, octylphenol and nonylphenol, alkylphenol polyglycol ethers, tributylphenyl polyglycol ethers, alkylaryl polyether alcohols, isotridecyl alcohol, fatty alcohol ethylene oxide condensates, ethoxylated castor oil, polyoxyethylene alkyl ethers, ethoxylated polyoxypropylene, lauryl alcohol polyglycol ether acetal, sorbitol esters, lignosulfite waste liquors and methylcellulose.

Petroleum fractions having medium to high boiling points, such as kerosene or diesel fuel, furthermore coal tar oils, and oils of vegetable or animal origin, aliphatic, cyclic and aromatic hydrocarbons, e.g. benzene, toluene, xylene, paraffin, tetrahydronaphthalene, alkylated naphthalenes or derivatives thereof, methanol, ethanol, propanol, butanol, chloroform, carbon tetrachloride, cyclohexanol, cyclohexanone, chlorobenzene or isophorone, or highly polar solvents, e.g. dimethylformamide, dimethyl sulfoxide, N-methylpyrrolidone or water, are suitable for the preparation of directly sprayable solutions, emulsions, pastes or oil dispersions.

Powders, combinations for broadcasting and dusts can be prepared by mixing or mutually grinding the active substances with a solid carrier.

Granules, e.g. coated granules, impregnated granules and homogeneous granules, can be prepared by binding the active compounds to solid carriers. Solid carriers are, e.g., mineral earths, such as silica gel, silicic acids, silicates, talc, kaolin, attaclay, limestone, lime, chalk, bole, loess, clay, dolomite, diatomaceous earth, calcium sulfate, magnesium sulfate, magnesium oxide, ground synthetic materials, fertilizers, such as, e.g., ammonium sulfate, ammonium phosphate, ammonium nitrate or ureas, and plant products, such as cereal meal, tree bark meal, wood meal and nutshell meal, cellulose

powders and other solid carriers.

The formulations generally comprise between 0.01 and 95% by weight, preferably between 0.1 and 90% by weight, of the active compound. The active compounds are employed therein in a purity of 90% to 100%, preferably 95% to 100% (according to the NMR spectrum).

Examples for formulations are:

I. 5 parts by weight of a compound according to the invention are intimately mixed with 95 parts by weight of finely divided kaolin. In this way, a dust comprising 5% by weight of the active compound is obtained.

II. 30 parts by weight of a compound according to the invention are intimately mixed with a mixture of 92 parts by weight of pulverulent silica gel and 8 parts by weight of liquid paraffin, which had been sprayed onto the surface of this silica gel. In this way, an active compound preparation with good adhesive properties (active compound content 23% by weight) is obtained.

III. 10 parts by weight of a compound according to the invention are dissolved in a mixture consisting of 90 parts by weight of xylene, 6 parts by weight of the addition product of 8 to 10 mol of ethylene oxide with 1 mol of the N-mono-ethanolamide of oleic acid, 2 parts by weight of the calcium salt of dodecyl-benzenesulfonic acid and 2 parts by weight of the addition product of 40 mol of ethylene oxide with 1 mol of castor oil (active compound content 9% by weight).

IV. 20 parts by weight of a compound according to the invention are dissolved in a mixture consisting of 60 parts by weight of cyclohexanone, 30 parts by weight of isobutanol, 5 parts by weight of the addition product of 7 mol of ethylene oxide with 1 mol of isooctylphenol and 5 parts by weight of the addition product of 40 mol of ethylene oxide with 1 mol of castor oil (active compound content 16% by weight).

V. 80 parts by weight of a compound according to the invention are intimately mixed with 3 parts by weight of the sodium salt of diisobutylnaphthalene-α-sulfonic acid, 10 parts by weight of the sodium salt of a lignosulfonic acid from a sulfite waste liquor and 7 parts by weight of pulverulent silica gel and are ground in a hammer mill (active compound content 80% by weight).

VI. 90 parts by weight of a compound according to the invention are mixed with 10 parts by weight of N-methyl-α-pyrrolidone and a solution is obtained which is suitable for use in the form of very small drops (active compound content 90% by weight).

VII. 20 parts by weight of a compound according to the invention are dissolved in a mixture consisting of 40 parts by weight of cyclohexanone, 30 parts by weight of isobutanol, 20 parts by weight of the adduct of 7 mol of ethylene oxide to 1 mol of isooctylphenol and 10 parts by weight of the adduct of 40 mol of ethylene oxide to 1 mol of castor oil. By running the solution into 100 000 parts by weight of water and finely dispersing it therein, an aqueous dispersion is obtained comprising 0.02% by weight of the active compound.

VIII. 20 parts by weight of a compound according to the invention are intimately mixed with 3 parts by weight of the sodium salt of diisobutylnaphthalene-α-sulfonic acid, 17 parts by weight of the sodium salt of a lignosulfonic acid from a sulfite waste liquor and 60 parts by weight of pulverulent silica gel and are ground in a hammer mill. A spray emulsion comprising 0.1% by weight of the active compound is obtained by fine dispersion of the mixture in 20 000 parts by weight of water.

IX. 10 parts by weight of the compound according to the invention are dissolved in 63 parts by weight of cyclohexanone, 27 parts by weight of dispersing agent (for example a mixture of 50 parts by weight of the adduct of 7 mol of ethylene oxide to 1 mol of isooctylphenol and 50 parts by weight of the adduct of 40 mol of ethylene oxide to 1 mol of castor oil). The stock solution is then diluted to the desired concentration, for example a concentration in the range from 1 to 100 ppm, by distribution in water.

The active compounds can be used as such, in the form of their formulations or of the application forms prepared therefrom, e.g. in the form of directly sprayable solutions, powders, suspensions or dispersions, emulsions, oil dispersions, pastes, dusts, compositions for broadcasting or granules, by spraying, atomizing, dusting, broadcasting or watering. The application forms depend entirely on the intended uses; they should in any case guarantee the finest possible dispersion of the active compounds according to the invention.

Aqueous application forms can be prepared from emulsion concentrates, pastes or wettable powders (spray powders, oil dispersions) by addition of water. To prepare emulsions, pastes or oil dispersions, the substances can be homogenized in water, as such or dissolved in an oil or solvent, by means of wetting agents, tackifiers,

dispersants or emulsifiers. However, concentrates comprising active substance, wetting agent, tackifier, dispersant or emulsifier and possibly solvent or oil can also be prepared, which concentrates are suitable for dilution with water.

The concentrations of active compound in the ready-to-use preparations can be varied within relatively wide ranges. In general, they are between 0.0001 and 10%. Often even small amounts of active compound I are sufficient in the ready-to-use preparation, for example 2 to 200 ppm. Ready-to-use preparations with concentrations of active compound in the range from 0.01 to 1% are also preferred.

The active compounds can also be used with great success in the ultra low volume (ULV) process, it being possible to apply formulations with more than 95% by weight of active compound or even the active compound without additives.

Oils of various types, herbicides, fungicides, other pesticides and bactericides can be added to the active compounds, if need be also not until immediately before use (tank mix). These agents can be added to the compositions according to the invention in a weight ratio of 1:10 to 10:1.

The compositions according to the invention can, in the application form as fungicides, also be present together with other active compounds, e.g. with herbicides, insecticides, growth regulators, fungicides or also with fertilizers. On mixing the compounds I or the compositions comprising them in the application form as fungicides with other fungicides, in many cases an expansion of the fungicidal spectrum of activity is obtained.

The following list of fungicides, with which the compounds according to the invention can be used in conjunction, is intended to illustrate the possible combinations but does not limit them:

- sulfur, dithiocarbamates and their derivatives, such as iron(III) dimethyldithiocarbamate, zinc dimethyldithiocarbamate, zinc ethylenebisdithiocarbamate, manganese ethylenebisdithiocarbamate, manganese zinc ethylenediaminebisdithiocarbamate, tetramethylthiuram disulfide, ammonia complex of zinc (N,N'-ethylenebisdithiocarbamate), ammonia complex of zinc (N,N'-propylenebisdithiocarbamate), zinc (N,N'-propylenebisdithiocarbamate) or N,N'-polypropylenebis(thiocarbamoyl)disulfide;
- nitro derivatives, such as dinitro(1-methylheptyl)phenyl crotonate, 2-sec-butyl-4,6-dinitrophenyl 3,3-dimethylacrylate, 2-sec-butyl-4,6-dinitrophenyl isopropyl carbonate or diisopropyl 5-nitroisophthalate;

- heterocyclic substances, such as 2-heptadecyl-2-imidazoline acetate, 2,4-dichloro-6-(o-chloroanilino)-s-triazine, O,O-diethyl phthalimidophosphonothioate, 5-amino-1-[bis(dimethylamino)phosphinyl]-3-phenyl-1,2,4-triazole, 2,3-dicyano-1,4-dithioanthraquinone, 2-thio-1,3-dithiolo[4,5-b]quinoxaline, methyl 1-(butylcarbamoyl)-2-benzimidazolecarbamate, 2-(methoxycarbonylamino)benzimidazole, 2-(2-furyl)benzimidazole, 2-(4-thiazolyl)benzimidazole, N-(1,1,2,2-tetrachloroethylthio)tetrahydrophthalimide, N-(trichloromethylthio)tetrahydrophthalimide or N-(trichloromethylthio)phthalimide,
- N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenylsulfdionic acid diamide, 5-ethoxy-3-trichloromethyl-1,2,3-thiadiazole, 2-thiocyanatomethylthiobenzothiazole, 1,4-dichloro-2,5-dimethoxybenzene, 4-(2-chlorophenylhydrazono)-3-methyl-5-isoxazolone, 2-thiopyridine 1-oxide, 8-hydroxyquinoline or its copper salt, 2,3-dihydro-5-carboxanilido-6-methyl-1,4-oxathiin, 2,3-dihydro-5-carboxanilido-6-methyl-1,4-oxathiin 4,4-dioxide, 2-methyl-5,6-dihydro-4H-pyran-3-carboxanilide, 2-methylfuran-3-carboxanilide, 2,5-dimethylfuran-3-carboxanilide, 2,4,5-trimethylfuran-3-carboxanilide, N-cyclohexyl-2,5-dimethylfuran-3-carboxamide, N-cyclohexyl-N-methoxy-2,5-dimethylfuran-3-carboxamide, 2-methylbenzanilide, 2-iodobenzanilide, N-formyl-N-morpholine 2,2,2-trichloroethyl acetal, piperazine-1,4-diylbis-1-(2,2,2-trichloroethyl)formamide, 1-(3,4-dichloroanilino)-1-formylamino-2,2,2-trichloroethane, 2,6-dimethyl-N-tridecylmorpholine or its salts, 2,6-dimethyl-N-cyclododecylmorpholine or its salts, N-[3-(p-(tert-butyl)phenyl)-2-methylpropyl]-cis-2,6-dimethylmorpholine, N-[3-(p-(tert-butyl)phenyl)-2-methylpropyl]piperidine, 1-[2-(2,4-dichlorophenyl)-4-ethyl-1,3-dioxolan-2-ylethyl]-1H-1,2,4-triazole, 1-[2-(2,4-dichlorophenyl)-4-(n-propyl)-1,3-dioxolan-2-ylethyl]-1H-1,2,4-triazole, N-(n-propyl)-N-(2,4,6-trichlorophenoxyethyl)-N'-imidazolylurea, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol, (2RS,3RS)-1-[3-(2-chlorophenyl)-2-(4-fluorophenyl)oxiran-2-ylmethyl]-1H-1,2,4-triazole, α-(2-chlorophenyl)- α-(4-chlorophenyl)-5-pyrimidine methanol, 5-butyl-2-dimethylamino-4-hydroxy-6-methylpyrimidine, bis(p-chlorophenyl)-3-pyridinemethanol, 1,2-bis(3-ethoxycarbonyl-2-thioureido)benzene or 1,2-bis(3-methoxycarbonyl-2-thioureido)benzene,
- strobilurins, such as methyl E-methoxyimino[α-(o-tolyloxy)-o-tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate, methyl E-methoxyimino-[α-(2-phenoxyphenyl)] acetamide, methyl E-methoxyimino-[α-(2,5-dimethylphenoxy)-o-tolyl]acetamide,
- anilinopyrimidines, such as N-(4,6-dimethylpyrimidin-2-yl)aniline, N-[4-methyl-6-(1-propynyl)pyrimidin-2-yl]aniline or N-[4-methyl-6-cyclopropylpyrimidin-2-yl]-aniline,

- phenylpyrroles, such as 4-(2,2-difluoro-1,3-benzodioxol-4-yl)pyrrole-3-carbonitrile,
- cinnamamides, such as 3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloylmorpholine,
- and various fungicides, such as dodecylguanidine acetate, 3-[3-(3,5-dimethyl-2-oxycyclohexyl)- 2-hydroxyethyl]glutarimide, hexachlorobenzene, methyl N-(2,6-dimethylphenyl)-N-(2-furoyl)-DL-alaninate, N-(2,6-dimethylphenyl)-N-(2'-methoxyacetyl)-DL-alanine methyl ester, N-(2,6-dimethylphenyl)-N-chloroacetyl-D,L-2-aminobutyrolactone, N-(2,6-dimethylphenyl)-N-(phenylacetyl)-DL-alanine methyl ester, 5-methyl-5-vinyl-3-(3,5-dichlorophenyl)- 2,4-dioxo-1,3-oxazolidine, 3-(3,5-dichlorophenyl)-5-methyl-5-methoxymethyl-1,3-oxazolidine-2,4-dione, 3-(3,5-dichlorophenyl)-1-isopropylcarbamoylhydantoin, N-(3,5-dichlorophenyl)-1,2-dimethylcyclopropane-1,2-dicarboximide, 2-cyano-N-(ethylaminocarbonyl)-2-[methoxyimino]acetamide, 1-[2-(2,4-dichlorophenyl)pentyl]-1H-1,2,4-triazole, 2,4-difluoro-α-(1H-1,2,4-triazolyl-1-methyl)benzhydryl alcohol, N-(3-chloro-2,6-dinitro-4-trifluoromethylphenyl)-5-trifluoromethyl-3-chloro-2-aminopyridine, 1-((bis(4-fluorophenyl)methylsilyl)methyl)-1H-1,2,4-triazole.

Preparation examples:

Example 1:

2-Chloro-N-(2-(2-benzyloxyimino-1-methyl-n-propoxy)phenyl)nicotinamide

1.1 2-Chloro-N-(2-hydroxyphenyl)nicotinamide

At 10°C, a solution of 21 g of 2-chloronicotinyl chloride in 100 ml of dichloromethane was added to a solution of 13.1 g of ortho-aminophenol and 24.2 g of triethylamine in 200 ml of dichloromethane, and the mixture was stirred at 10°C for 1 hour and at room temperature for 60 h. The reaction mixture was then concentrated under reduced pressure, and the resulting residue was taken up in ethyl acetate. The organic phase was washed twice with dil. hydrochloric acid and 3% strength aqueous sodium hydroxide solution. After drying over sodium sulfate, the solvent was evaporated under reduced pressure, giving 27.6 g of the title compound of melting point 142-145°C.

1.2 2-Chloro-N-(2-(1-methyl-2-oxo-n-propoxy)phenyl)nicotinamide

A solution of 1.24 g of 2-chloro-N-(2-hydroxyphenyl)nicotinamide, 1.58 g of 3-bromobutan-2-one and 0.34 g of potassium carbonate in 20 ml of

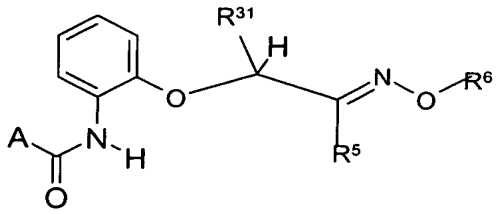
N,N-dimethylformamide was stirred at room temperature for 1 h and then at 60°C for 2 h. A mixture of water and ethyl acetate was then added, and the phases were separated. The aqueous phase was extracted twice with ethyl acetate. The combined organic phase was washed with saturated NaCl solution, dried over sodim sulfate and concentrated under reduced pressure. The resulting residue was purified chromatographically on silica gel (mobile phase: cyclohexane/methyl tert-butyl ether), giving, after evaporation of the eluent, 1.0 g of the title compound as an oil.

1.3 2-Chloro-N-(2-(2-benzyloxyimino-1-methyl-n-propoxy)phenyl)nicotinamide

0.18 g of O-Benzylhydroxylamine was added to a solution of 0.36 g of 2-chloro-N-(2-(1-methyl-2-oxo-n-propoxy)phenyl)nicotinamide and 0.12 g of pyridine in 10 ml of methanol. The mixture was concentrated at room temperature for 15 minutes, the solvent was evaporated under reduced pressure and the resulting residue was taken up in methyl tert-butyl ether. The mixture was washed with 1% strength hydrochloric acid and sat. NaCl solution and dried over sodium sulfate, and the mixture was concentrated under reduced pressure. The precipitated crystals were filtered off and dried under reduced pressure, giving 0.3 g of the title compound of melting point 53-55°C.

The compounds of the formula IA listed in table 43 were prepared in an analogous manner.

Table 43:



(IA) {where R^1 = H, n = 0 and R^{41} = H}

No.	A	R^{31}	R^5	R^6	m.p. [°C]; consistency	Spectroscopical data
IA-1	2-chloro-pyridin-3-yl	CH_3	CH_3	$C_6H_5CH_2$	53-55	
IA-2	2-chloro-pyridin-3-yl	CH_3	CH_3	allyl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.57 (d, 3H); 1.83 (s, 3H); 4.58 (m, 2H); 5.04 (m,

No.	A	R^{31}	R^5	R^6	m.p. [°C]; consistency	Spectroscopical data
IA-2	2-chloro-pyridin-3-yl	CH_3	CH_3	allyl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.57 (d, 3H); 1.83 (s, 3H); 4.58 (m, 2H); 5.04 (m, 1H); 5.18-5.31 (m, 2H); 5.93 (m, 1H); 6.99-7.10 (m, 3H); 7.22 (m, 1H); 8.18 (m, 1H); 8.51 (m, 1H); 9.22 (s_{broad}, 1H).
IA-3	2-chloro-pyridin-3-yl	CH_3	CH_3	trans-2-buten-1-yl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.57 (d, 3H); 1.70 (m, 3H); 1.80 (s, 3H); 4.49 (m, 2H); 5.02 (q, 1H); 5.58-5.80 (m, 2H); 6.99-7.10 (m, 3H); 7.22 (m, 1H); 8.16 (m, 1H); 8.51 (m, 2H); 9.20 (s_{broad}, 1H).
IA-4	2-methyl-4-trifluoro-methyl-thiazol-5-yl	CH_3	CH_3	CH_3	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.52 (d, 3H); 1.77 (s, 3H); 2.79 (s, 3H); 3.90 (s, 3H); 5.01 (q, 1H); 6.93-7.11 (m, 4H); 8.43 (m, 1H); 8.70 (m, 1H).
IA-5	2-methyl-4-trifluoro-methyl-thiazol-5-yl	CH_3	CH_3	trans-3-chloroallyl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.53 (d, 3H); 1.77 (s, 3H); 2.75 (s, 3H); 4.53 (d, 2H); 5.01 (q, 1H); 6.07 (m, 1H); 6.20-6.33 (m, 1H); 6.93-7.11 (m, 3H); 8.45 (m, 1H); 8.84 (s_{broad}, 1H).
IA-6	1-methyl-3-trifluoro-methyl-pyrazol-4-yl	CH_3	CH_3	trans-3-chloroallyl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.53 (d, 3H); 1.79 (s, 3H); 3.95 (s, 3H); 4.54 (d, 2H); 5.00 (q, 1H); 6.08 (m, 1H); 6.17-6.29 (m, 1H); 6.96-7.10 (m, 2H); 8.10 (m, 1H); 8.45 (m, 1H); 8.59 (s_{broad}, 1H).
IA-7	1-methyl-3-trifluoro-methyl-pyrazol-4-yl	CH_3	CH_3	CH_3	100-102	

No.	A	R^{31}	R^5	R^6	m.p. [°C]; consistency	Spectroscopical data
IA-8	1-methyl-3-trifluoro-methyl-pyrazol-4-yl	CH_3	CH_3	$C_6H_5CH_2$	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.58 (d, 3H); 1.80 (s, 3H); 3.95 (s, 3H); 4.98 (m, 1H); 5.17 (s, 2H); 6.82-6.99 (m, 3H); 7.25-7.45 (m, 4H); 8.07 (m, 1H); 8.46 (m, 1H); 8.59 (s_{broad}, 1H).
IA-9	2-chloro-pyridin-3-yl	CH_3	CH_3	$CH(CH_3)_2$	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.20 (m, 6H); 1.53 (d, 3H); 1.80 (s, 3H); 4.29 (m, 1H); 5.03 (m, 1H); 6.95-7.15 (m, 3H); 7.43 (m, 1H); 8.31 (m, 1H); 8.47-8.51 (m, 2H); 9.23 (s_{broad}, 1H).
IA-10	2-chloro-pyridin-3-yl	CH_3	CH_3	trans-3-chloroallyl	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.57 (d, 3H); 1.80 (s, 3H); 4.52 (d, 2H); 5.01 (q, 1H); 6.09 (m, 1H); 6.18-6.30 (m, 1H); 6.99-7.13 (m, 3H); 7.03 (m, 1H); 8.35 (m, 1H); 8.51 (m, 2H); 9.21 (s_{broad}, 1H).
IA-11	2-chloro-pyridin-3-yl	CH_3	CH_3	CH_3	74-75	
IA-12	2-chloro-pyridin-3-yl	CH_3	CH_3	C_2H_5	oil	*^{1}H-NMR ($CDCl_3$), δ [ppm]:* 1.25 (d, 3H); 1.58 (d, 3H); 1.80 (s, 3H); 4.11 (m, 2H); 5.02 (m, 1H); 6.97-7.10 (m, 3H); 7.47 (m, 1H); 8.31 (m, 1H); 8.23-8.28 (m, 2H); 9.22 (s_{broad}, 1H).

Allyl: $CH_2CH=CH_2$;
m.p.: Melting point

Use examples:

The active compounds were prepared as a stock solution comprising 0.25% by weight of active compound in acetone or dimethyl sulfoxide (DMSO). 1% by weight of the emulsifier Uniperol® EL (wetting agent having emulsifying and dispersant action based on ethoxylated alkylphenols) was added to this solution, and the mixture was diluted with water to the desired concentration.

Curative action against brown rust of wheat

Leaves of potted wheat seedlings of the cultivar "Kanzler" were dusted with spores of brown rust (*Puccinia recondita*). The pots were then placed in a chamber with high atmospheric humidity (90 to 95%) at 20-22°C for 24 hours. During this time, the spores germinated and the germinal tubes penetrated into the leaf tissue. The next day, the infected plants were sprayed to runoff point with an aqueous suspension having the concentration of active compound stated below. The suspensions or emulsions were prepared as described above. After the spray coating had dried on, the test plants were cultivated in a greenhouse at temperatures between 20 and 22°C and at 65 to 70% relative atmospheric humidity for 7 days. The extent of the rust fungus development on the leaves was then determined.

No.	Infection at 63 ppm (% of leaf area)
IA-4	0
IA-5	7
IA-7	3
untreated	90

Protective action against *Puccinia recondita* on wheat (brown rust of wheat)

Leaves of potted wheat seedlings of the cultivar "Kanzler" were sprayed to runoff point with an aqueous suspension having the concentration of active compound stated below. The next day, the treated plants were dusted with spores of brown rust of wheat (*Puccinia recondita*). The plants were then placed in a chamber with high atmospheric humidity (90 to 95%), at 20-22°C, for 24 hours. During this time, the spores germinated and the germinal tubes penetrated into the leaf tissue. The next day, the test plants were returned into the greenhouse and cultivated at temperatures between 20 and 22°C and at 65 to 70% relative atmospheric humidity for a further 7 days. The extent of the rust development on the leaves was then determined visually.

No.	Infection at 63 ppm (% of leaf area)
IA-1	10
IA-4	3
IA-5	3
IA-6	5
IA-7	3
IA-8	3
IA-9	5
IA-10	5
IA-11	10
IA-12	3

No.	Infection at 63 ppm (% of leaf area)
untreated	90